JOSH GREEN, M.D. SYLVIA LUKE LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA





## STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I **DEPARTMENT OF LAND AND NATURAL RESOURCES** KA 'OIHANA KUMUWAIWAI 'ĀINA

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DAWN N.S. CHANG CHAIRPERSON BOARD OF LAND AND NATURAL RESOURCES COMMISSION ON WATER RESOURCE MANAGEMENT

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KAHOOLAWE ISLAND RESERVE COMMISSION

## **Testimony of** DAWN N. S. CHANG Chairperson

## **Before the Senate Committee on** TRANSPORTATION AND CULTURE AND THE ARTS

Tuesday, March 28, 2023 3:00 PM **State Capitol, Conference Room 224** 

## In consideration of SENATE CONCURRENT RESOLUTION 114/SENATE RESOLUTION 107 **RECOGNIZING AUGUST 8, 2023, AS HAWAIIAN HONEYCREEPERS** CELEBRATION DAY

Senate Concurrent Resolution 114/Senate Resolution 107 recognize August 8, 2023, as Hawaiian Honeycreepers Celebration Day and encourage the people, organizations and government of Hawai'i to observe this day with appropriate celebrations and activities to deepen the pilina (relationships) with the native manu (birds). The Department of Land and Natural Resources (Department) supports these measures.

Hawaiian honeycreepers are a unique group of forest birds found only in Hawaii. The first ancestors of the honeycreepers arrived to the islands when Ni'ihau was just emerging from the ocean, and since then, honeycreepers have evolved into over 50 different species. Of the over 50 honeycreeper species, only 17 remain; many are now extinct, and 11 are federally and state listed as endangered or threatened under the Endangered Species Act and Chapter 195D, Hawai'i Revise Statutes, respectively.

The remaining honeycreepers are threatened by habitat loss and degradation and predation by introduced predators, however the biggest threat they face is avian malaria transmitted by nonnative mosquitoes. A single bite from an infected mosquito can kill a honeycreeper. Previously safe, mosquito-free habitat is disappearing due to warming temperatures in high elevation forests across the state.

Four species of Hawaiian Honeycreeper are currently facing an extinction crisis as warming temperatures enable mosquitoes to persist and transmit avian malaria to honeycreepers at high elevations year-round. 'Ākohekohe and kiwikiu on Maui and 'akikiki and 'akeke'e on Kaua'i are all expected to become extinct within the next decade. Swift conservation intervention is needed to avert these extinctions. To protect these and other honeycreeper species, the Department and partner agencies are working toward deploying an incompatible insect technique to suppress populations of mosquitoes at landscape scale in key honeycreeper habitat areas on Maui and Kaua'i.

Given the urgent need to protect honeycreepers (especially 'ākohekohe, kiwikiu, 'akikiki and 'akeke'e), designating a day to celebrate these unique birds will allow for targeted outreach and education surrounding honeycreeper conservation.

Mahalo for the opportunity to provide testimony in support of these measures.

## The Nature Conservancy, Hawaiʻi and Palmyra 923 Nuʻuanu Avenue Honolulu, HI 96817

Tel (808) 537-4508 Fax (808) 545-2019 nature.org/HawaiiPalmyra

## Testimony of The Nature Conservancy Supporting SCR 114/SR 107, Recognizing August 8, 2023, As Hawaiian Honeycreepers Celebration Day.

## Committee on Transportation and Culture and the Arts March 28, 2023, 3:00 pm Conference Room 224 and via Videoconference

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee:

The Nature Conservancy (TNC) supports SCR 114/SR 107, Recognizing August 8, 2023, As Hawaiian Honeycreepers Celebration Day.

Hawai'i's cherished honeycreepers evolved with the Hawaiian Islands. Their song, image and significance are woven into the fabric of the islands' culture and place. Their feathers adorned Hawaiian royalty. Hawaiian chants celebrate their existence. As pollinators, Hawaiian honeycreepers fill an irreplaceable niche within Hawai'i's native forests, which are the source of all our islands' freshwater. If we lose these special birds, we also lose the ecological functions they perform and a piece of Hawaiian culture.

While it took millions of years for these beautiful and melodious birds to evolve uniquely to their environment, we could lose them in our lifetime. Only 17 of more than 50 species of Hawai'i's forest birds remain, and many are critically endangered due to several threats.

One of the most urgent threats is invasive mosquitoes, which were introduced to Hawai'i in roughly the past 200 years. As the climate warms, mosquitoes are reaching higher elevations where Hawai'i's forest birds are defenseless against mosquito-borne diseases like avian malaria. Just one bite can kill a native bird. Four Hawaiian honeycreepers are at risk of extinction within the next ten years: 'akikiki ~ one year; kiwikiu ~ six years; 'akeke'e ~ eight years; and 'akohekohe ~ ten years.

Hawai'i is taking action to prevent the loss of any more honeycreepers. Historically, pesticide application and management of breeding habitat were the only options for controlling mosquitoes, neither of which are appropriate for controlling mosquitoes in the forest habitat where Hawai'i's endemic forest birds persist. But now there is hope with an approach called Incompatible Insect Technique (IIT) which leverages naturally occurring bacteria within the invasive mosquitoes and releases of "incompatible" male mosquitoes to suppress populations. Note, male mosquitoes are nectar feeders and do not bite humans or wildlife, nor are mosquitoes important for native species or ecosystem function in Hawai'i.

We are excited to have an option for saving our birds from mosquito-borne disease that is safe for animals and humans alike. Decades ago, IIT was developed for agricultural pest and human disease

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The Nature Conservancy, Hawai'i and Palmyra March 27, 2023 Page 2

control, and it went through rigorous vetting and regulatory approvals to be applied safely in human-inhabited areas. This project is proposing to release incompatible male mosquitoes in the remote mountain forests of our islands, starting on Maui. Most people will not even see the released male mosquitoes as they will not interact with humans.

IIT is a good option for disrupting the avian malaria disease crisis imperiling Hawai'i's endemic forest birds: it is specific to only one species of mosquito, it does not introduce toxicants to the environment, and the removal of introduced mosquitoes will not impact the native food web in Hawai'i's forests. Furthermore, this action would not introduce any new organisms to Hawai'i. Wolbachia, the genus of intracellular bacteria naturally occurring in mosquitoes, prevents reproduction when mating male and female mosquitoes carry incompatible strains.

Recognizing August 8<sup>th</sup> as Hawaiian Honeycreepers Celebration Day will help to bring public attention and support to the efforts to prevent extinctions of these iconic birds. TNC supports these efforts to engage the public and strengthen support for conservation efforts.

Mahalo for the opportunity to support SCR 114 and SR 107.

The Nature Conservancy of Hawai'i and Palmyra is a non-profit organization dedicated to the preservation of the lands and waters upon which all life depends. The Conservancy has helped protect more than 200,000 acres of natural lands in Hawai'i and Palmyra Atoll. We manage 40,000 acres in 13 nature preserves and work in over 50 coastal communities to help protect and restore the nearshore reefs and fisheries of the main Hawaiian Islands. We forge partnerships with government, private parties, and communities to protect forests and coral reefs for their ecological values and for the many benefits they provide to people.







of the more than 50 species of honeycreepers endemic to Hawai'i, only 17 species remain and 12 of those are designated as critically endangered or threatened by the federal or State government.

## Please save us!

# Tweet or Vote YES

For The Resolution on recognizing August 8th, 2023 as Hawai'i Honeycreeper Celebration Day!

## Ploaso liston to our young people\_

This year, 'Iolani school ninth graders spent the better part of a month learning about the uniqueness of our Hawaiian honeycreepers and the role they play in our state - both biologically and culturally. The topics were diverse and included the concept of an organism's niche in the habitat, nutrient and energy flow in an ecosystem, and ecosystem resilience.

Through it all, each student researched one specific honeycreeper in depth - learning about its lifestyle, needs, and ecological interactions. From watching kahiko dances about the extinct O'o to thinking about the different organisms that the birds need to survive, the students immersed themselves in our rainforest ecosystems.

A hundred of our biology students turned in various styles of testimony in support of Hawai'i Honeycreeper Celebration Day. We picked a sample of the best of the letters and posters to represent the group's opinions.

Passing the resolution would give our honeycreepers needed recognition and help pave the way for more ambitious conservation efforts.

Mahalo nui loa in advance for voting for our resolution!

Lara K. Lee, PhD

Sara Allan, MA Ed

'Iolani School Science Department

They are our future!



The honey creepers need your help. Please support our resolution for the honeycreepers and vote in favor of the Hawaiian Honeycreeper Celebration Day. They are a key part of our Hawaiian culture and ecosystems and we can't afford to lose them.

## Dear Legislature of Hawaii,

I am a current 'Iolani school student and I am writing to you about the Hawaiian Honeycreepers which are either already endangered, or they are at extremely high risks of extinction, and we need to save them and spread awareness about this. The Hawaiian Honeycreepers have been declining and are already endangered. There have been around 50 species and now, only 17 species and many of them have less than 200 individuals remaining causing them to be on the verge of extinction. Unless we do something now about it, they will become extinct and a big part of not only the ecosystems in Hawaii will be affected because they are keystone species since they are important in pollination and the dispersion of seeds, but a big part of Hawaiian culture will be gone.

Often mistaken as finches, Hawaiian Honeycreepers are small to medium sized birds with their plumage of various colors and with beaks of variation of sizes and shapes. They evolved from a single species of finch that arrived to the Hawaiian Islands millions of years ago which evolved into 50 to 60 species of honeycreepers. They are endemic to Hawaii and in Native Hawaiian culture, the Native Hawaiians have a deep connection with them and honor and revere them. They also regard them as spirits, gods, family, and ancestors, and are considered spiritual guides. Their feathers are seen as symbols of power and early Hawaiians have been known to pluck their feathers for many different cultural purposes including for creating leis, cloaks and helmets for those of nobility.

The Hawaiian Honeycreepers are important to their ecosystem in many ways. They are important pollinators to native plants including the Ohia, they disperse seeds around, and they are important for keeping the insect population under control. No other population of birds could replace what the honeycreepers are doing to the ecosystem, if they were to go extinct, since the Hawaiian Islands are so isolated

The first thing we need to know in order to save the Hawaiian Honeycreepers, is to find out what is causing the problem, and from there, we can find solutions. The biggest problem causing the honeycreeper populations to decline is the increasing presence of mosquitoes carrying avian malaria in their habitat and global warming which correlate together. Honeycreepers live in altitudes over 3000 feet where the climate is cooler so mosquitoes cannot inhabit there and spread the deadly avian malaria to them. However, now with global warming occurring, the altitudes where the honeycreepers previously inhabited have become warmer so it is now inhabitable by mosquitoes. This causes the honeycreepers to move to higher altitudes where it is cooler in an attempt to flee them and the avian malaria they carry. Some other problems include loss of habitat, and predation by invasive species brought over by foreigners.

To save the honeycreepers, we need to put effort into preventing global warming, establishing laws preventing deforestation that causes loss of habitat to the honeycreepers, and finally, controlling the populations of invasive species.

We need to take action now to help repopulate the critically endangered honeycreepers. By doing this, we can save Hawaiian culture, help the ecosystems to thrive, and also save native Hawaiian plants. Honeycreepers have always been a big part of ancient Hawaiian culture, which we need to sustain. Also, they are also keystone species, meaning they are important parts of the ecosystem and they pollinate plants including many native Hawaiian endangered plants. They also are important for seed dispersion. By saving them, we can preserve the unique Hawaiian ecosystem which is full of biodiversity. We can save them from extinction if we make efforts to prevent global warming, control invasive species' populations, and prevent deforestation. We need to spread awareness and Hawaii should make August, 8, 2023, as Hawai'i Honeycreepers celebration day.

## Sincerely,

A Concerned Hawaiian Citizen

### References

CENGAGE. (n.d.). Hawaiian Honeycreepers: Drepanididae. Retrieved February 16, 2023, from https://www.encyclopedia.com/science/encyclopedias-almanacs-transcripts-and-maps/hawaiian-honeycreepers-drepanididae

Derouin, S. (2016, November 18). The beloved Hawaiian honeycreeper birds are at risk of extinction from avian malaria. Retrieved February 16, 2023, from

https://news.mongabay.com/2016/11/the-beloved-hawaiian-honeycreeper-birds-are-at-risk-of-extinction-from-avian-malaria/

Kaiser, S. (2016, September 21). Birds at the Edge: The Plight of the Hawaiian Honeycreepers. Retrieved February 16, 2023, from

https://www.islandconservation.org/plight-of-the-hawaiian-honeycreepers/#:~:text=Through%20seed%20dispersal%20and %20pollination,were%20all%20to%20completely%20disappear.

McClymont, R., & Paxton, E. H. (2022, May 25). A Climate Change Canary in the Coal Mine - The Endangered Hawaiian Honeycreepers. Retrieved February 16, 2023, from

https://www.usgs.gov/news/featured-story/climate-change-canary-coal-mine-endangeredhawaiian-honeycreepers

# RECOGNIZING AUGUST 8, 2023 AS lawaii floneycreepers celebration Day

why should this matter?

## culturally...

- Part of Hawai'i's history, beliefs
- Feathers were "sacred"
  - Clothing made with honored feathers
  - Only ali'i could wear cloaks, clothing and headpieces made of honeycreeper feathers
  - Shows the honor, remembrance, and respect native Hawaiians hold for honeycreepers
- Vital to keep Hawai'i's fading culture alive, thriving and true to itself









## in flavaiis ecozystem

- Vital part of the ecosystem:
  - -Acts as main pollinators in Hawai'i
- -Pollinates native plant species such as the 'ohi'a lehua, keeping this native plant species alive and thriving
- -Without honeycreepers, parts of the food chain could fail
  - -Other native species that feed on native plants pollinated, such as the ohi'a lehua

HAWAII HONEYCREEPER CELEBRATION DAY WOULD RAISE AWARENESS FOR ENDANGERED HONEYCREEPERS!

## Dear Legislators of Hawaii,

I am a 9th grader at 'Iolani School. I firmly believe that it is of utmost importance to save the Hawaiian Honeycreepers as extinction looms closer and closer for these birds. These honeycreepers, which are found nowhere else in the world but on the Hawaiian Islands, are on the brink of extinction, which is why we must rectify this crisis by taking action. There are many reasons for the decline in Hawaiian Honeycreeper species, some of which include habitat degradation, human activity, invasive species,

introduced invasive species, introduced competitors, diseases, and more.

1 The conservation of Hawaiian Honeycreepers is of significance as they play a major role here in the Hawaiian islands, both from a cultural and biological aspect. Honeycreepers are of great significance in native Hawaiian culture, some of which are believed to be the physical embodiments and representations of ancient deities, such as the 'Apapane and the Kiwikiu. An attestation to this significance is the Honeycreepers impact on their respective ecosystems as a keystone species as it facilitates the stability and growth of the ecosystems here on the islands. They assist with biodiversity conservation, which aids with the upkeep of biological functions in ecosystems such as nurturing recycling, pest and disease regulation, pollination, etc. and are vital in the ecosystem's inertia and resilience. Ecosystems with higher biodiversities tend to be more productive and stable as they are correlated with the amount of biodiversity an ecosystem has. Predators and other threats such as avian malaria jeopardize the Honeycreeper species by habitat degradation and disease dispersal. The warming of the climate caused by global warming and climate change are enabling mosquitoes to move into higher elevations, pushing Hawaiian Honeycreepers to live in high-elevation areas such as the Alaka'i Plateau on Kauai and Haleakalā on Maui. These mosquitoes carry the protozoan parasite, P. Relictum, which causes avian malaria, which can kill these Hawaiian Honeycreeperspecies. For example, the 'Alauahio and the l'iwi had a mortality rate that exceeded 75% after being exposed to single mosquito bites.

2 The extinction of the Hawaiian honeycreepers would eventually impact us from a biological perspective. Due to the fact that their biological niche includes seed dispersal and the pollination of many different plants in their ecosystem, some of which are endemic to Hawaii. This allows for an increase in the biodiversity of the ecosystem, but also allows for the increase of oxygen in the atmosphere, which would then assist with respiration. The biological niche of the Hawaiian Honeycreepers also includes the predation on insects, which help with pest control, which would in turn benefit humans as insects with an exponential growth without a limiting factor would negatively affect the quality of life for many. As expressed, it would be of interest to take action and conserve the Hawaiian Honeycreepers due to their significance and important roles that they play in Hawaiian ecosystems and in Hawaiian culture. They play an integral role in culture as symbols of deities and are a keystone species in ecosystems through their biological niche which consists of pollination, seed dispersal, insect regulation and control, and more. The success of our actions to save the Hawaiian Honeycreepers heavily relies on the awareness of the community and their support.

I support the action of taking a reasonable approach to tackle this issue by recognizing August 8, 2023, as a celebratory day of awareness for the Hawaiian Honeycreepers.

## Mahalo!

2 Atkinson, C. T., Lease, J. K., Drake, B. M., & Shema, N. P. (2001). Pathogenicity, serological responses, and diagnosis of experimental and natural malarial infections in native hawaiian thrushes. The Condor, 103(2), 209-218. https://doi.org/10.1093/condor/103.2.209

1 Atkinson, C. T., & Lapointe, D. A. (2009). Introduced avian diseases, climate change, and the future of hawaiian honeycreepers. Journal of Avian Medicine and Surgery, 23(1), 53-63. https://doi.org/10.1647/2008-059.18 Honolulu





**FEBRUARY 15, 2023** 

Hawaii State Legislation Government Official Hawaii, United States

Dear Hawaii State Legislator,

I am a current student of 'Iolani School. A few weeks ago, my classmates and I were given an assignment, regarding different types of Hawaiian Honeycreepers. We were given the task to research and get to know our bird. Some of us got to research about the amazing birds that live on the Hawaiian islands, but others weren't as fortunate becasue the birds they researched had already become extinct. Extinction of these majestic creatures is a problem that has continued to grow at an alarming rate. As a student, citizen of Hawaii, and person who cares about these spectacular creatures, I am asking you to please consider voting for our resolution, in an attempt to save the Hawaiian Honeycreepers.

The Hawaiian Honeycreepers are a species of birds that are native to the Hawaiian islands. In the past, there were more than 50 species of honeycreepers spread across Hawaii—today, only 17 species remain (McClymot, n.d.). The population decline of native forest birds has continued to increase in the past 2 decades. There are many contributing factors to this, including disease, climate change, loss of habitats, and predation. If these problem are not dealt with accordingly, the native species that make our islands so unique will cease to exist.

These islands are just as much of our homes, as it is the homes of the wildlife of Hawaii. Therefore, we should take the time to care for these birds and our Hawaiian islands. We need to take charge of this situation and save our honeycreepers. Please take all of this into consideration when choosing whether or not to vote in support of our resolution.

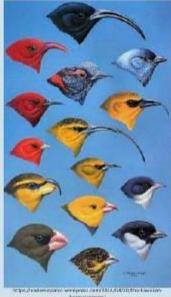
## Vote "Yes!" To Recognize Our Honeycreepers



## Why I Care:

I am a 9th grader at 'Iolani school who is taking the biology course currently. I want to preserve Hawai'i's history. I care about the continuation of the lives of today's Hawaiian honeycreepers. Please say, "yes" to the Hawai'i honeycreeper resolution and appreciate these important species which benefit our island.





## Threats:

Mosquitoes are a great threat to Hawaiian honeycreepers. Avian malaria is detrimental to the honeycreepers' health and one bite leads to death. Scientists believe that if nothing is done to limit the number of mosquitoes that the honeycreepers will go extinct. Climate change also affects this. With rising temperatures, mosquitoes can go to higher elevations without dying. If this continues and they are able to survive higher elevations where the honeycreepers live, it will be difficult for the honeycreepers to not get infected.



https://kauaiforestbirds.org/anianiau/



## **Ecological Importance:**

Hawaiian honeycreepers are important pollinators of native plants. The 'l'iwi and they help pollinate the 'Ohi'a trees, an endangered plant. These birds maintain balance in the ecosystem by supporting native plant species. Deforestation of this tree due to Rapid 'Ohi'a Death, lessens food for many honeycreepers including the 'l'iwis and 'anianiaus.



/www.privatetourshawali.com/blog/the-liwi-bird-hawalian-honeycreeper

## Cultural significance:

The 'I'iwi have cultural significance. This bird's scarlet feathers have been seen in the capes made for the royalty. Each feather was handpicked just for the cape. Feathers were used to show the status of someone back. The Hawaiian honeycreepers have lived alongside natives and it would be a shame not to appreciate them. By acknowledging these Hawaiian honeycreepers, we are protecting its history.

## Dear Legislators,

I am K ----- from 'Iolani School. After being assigned a honeycreeper in biology class, we researched about them, learning many new things. I was assigned the o'u and shocked to find out that they have not been seen since 1992 and could potentially be extinct. During my research, I only found 2 sites with information about the o'u. To me, this meant they were either great hiders or no one cared enough to find more information on them. I may not be a professional, but the fact is that honeycreepers have long been around, treasured by ancient Hawaiians, yet we do not continue that legacy today. As such, I request your support for the honeycreeper bill.

Many species of honeycreepers have gone extinct in a short period of time, with only 17 out of 50 species alive. With avian malaria and other mosquito-borne diseases, habitat and food resource loss, and predation, the decline in population is continuous. Avian malaria is the worst out of all these death causes. An 'i'wi can be killed by a single bite from a mosquito infected with avian malaria. With the climate warming, mosquitos move up into the honeycreeper's last refuge. We should take care of the problem we have caused. The honeycreepers were here during ancient Hawaiian times and had far less predators then. When settlers began to arrive, rats and mosquitoes did too. Rats fed on the honeycreepers and their eggs and the birds could do nothing as they had never had such predators before. Mosquitoes carried diseases which the honeycreepers had no immunity to. If the honeycreepers go extinct, our Hawai'i ecosystem will collapse as they act as pollinators for native plants, saving their population, and even control the insect populations. If nothing is done to help, in the next 10 years, all the honeycreepers will be extinct.

Even though we can do little, conservationists do their best to help the honeycreepers. They aretrying a captive breeding program and working on controlling the rat population. Currently, ways to control the mosquitoes and warming temperatures are being thought of. The key to continue the protection of honeycreepers is by generating awareness. To do this, a coast-to-coast trail is in the process of being built. Hawai'i is very isolated and so no bird population can replace the honeycreepers when they go extinct. These unique birds should be recognized for their significance in history, culture, and the ecosystem. There are so many factors that can cause the extinction of honeycreepers that even taking care of them will help the population. The populations we brought to Hawai'i ourselves are killing the native animals that lived here for years, yet we get no help from the government who would be able to help the most.

So again, I request your support for the honeycreeper bill.

## Please Vote in Favor of: Hawaiian Honeycreepers Celebration Day





August 8, 2023 as Hawaiian Honeycreepers Celebration Day

I am a 9th grade student taking biology at 'Iolani School and I am asking for your help in supporting this Resolution. Even though they are crucial to the ecosystem, Hawaiian Honeycreepers are becoming rarer every year. Passing this resolution would raise awareness and assist the Honeycreepers in their struggle of survival.

In the next 10 years, many more Hawaiian honeycreepers will be pushed to the brink of extinction by avian malaria.

Only 17/50 species of Honeycreepers remain today.

Dear Legislators of the State of Hawaii,

I am a student at 'lolani school, and I am writing to ask for your support in the passing of the proposed bill that will grant honeycreepers in Hawai'i with special status. These birds used to be protected by the cool climates of higher altitudes, however the results of global warming have left this species vulnerable to avian diseases. In fact, the honeycreeper population has declined by 94% in the past fifteen years. This means that only 17 species remain to this day. If ecologists don't interfere and try to save the birds, then they could go extinct within ten to thirty years. After conducting research on specific honeycreepers for nearly a month, I've come to the conclusion that honeycreepers deserve more recognition for everything they do for Hawaii's ecosystem as well as the cultural impact they make.

The honeycreeper population had begun declining in the 1800's with the arrival of Captain Cook and other European colonizers. Alongside the explorers came foreign species such as rats and mosquitoes that immediately made an impact on the islands upon their arrival. Rats would raid the honeycreepers' nests in search of eggs or young, small adults. Since this was the first time that honeycreepers were faced with predatory threats, they had no ways of protecting themselves. In addition to rats, other mammals such as cats, boars, and mongoose were released into the wild, which contributed to the rapid decline of the honeycreepers but in much more violent and severe ways (Kaiser). As a result, these honeycreepers had to move and adjust to different areas of the island in order to remain safe.

Another harmful factor that led to the reduction of the honeycreepers includes mosquitoes and the avian diseases they transmit. Mosquitos would bite the birds, which injects plasmodium protozoan parasites that cause a loss of red blood cells in the bird (Derouin). This led to the birds moving to higher areas of elevation, for the mosquitoes do not like cooler climates. While this strategy worked for the honeycreepers, it is slowly starting to fail due to climate change. With the planet's temperature increasing at a relatively rapid rate, the areas of Hawaii that were once a cool sanctuary for the honeycreepers are slowly becoming taken over by the mosquitoes, who can now manage the conditions of the area. This means that we must help the honeycreepers, who have nowhere else to seek refuge or flee to.

Honeycreepers have a vital role in Hawaii because they are endemic keystone species. Due to adaptive radiation, they have evolved from a type of finch to an endemic species that is a component in the flourishing ecosystem. Over time, their beaks have adapted to being better at acquiring the nectar from different native flowers. For instance, the honeycreepers primarily feed on nectar from the ohia. The honeycreepers are the only birds who have a beak that can actually retrieve the nectar from the ohia filaments. As they feed off the flowers, they also facilitate the growth and distribution of native plants through seed dispersal and pollination. Not only that, but they manage and control the population numbers of varying insects. Without the honeycreepers, there will be a decline of native plants and an unbalanced number of insects that will throw off Hawaii's ecosystem.

In addition to playing a significant role in Hawaii's ecosystem, the honeycreepers have also made a cultural impact. A majority of the education provided at 'lolani is based around Hawaii's culture and ancient history, also known as 'ike ku'una. As a result, honeycreepers have been brought up on numerous occasions. Historically, honeycreepers were valued for their beautiful feathers that were used for cloaks, helmets, and leis for the Hawaiian chiefs, or the ali'i (Names). This is because honeycreepers, such as the 'i'iwi, symbolize power and prestige. Only the highest ranked men could wear the feathered cloaks, and only on special occasions. The birds were patiently tracked down, then had their feathers meticulously picked in order to not hurt or damage the bird. Other than their feathers, the honeycreepers themselves were valued as aumakua, which Hawaiians believe are their family god in a physical form. Another example of how they were respected includes hula and Kumulipo, which are dances and chants. Stories of the honeycreepers were passed down from ancestors to remind the younger generations of the importance and value of the birds.

Honeycreepers have been uncredited for so long, so we should repay them by trying to salvage the remaining species we have. There are some conservationists who have initiated projects to help replenish the honeycreeper population. One solution they have started are captive breeding programs that allow honeycreepers to reproduce in a peaceful sanctuary before being released back into the wild. In addition, further measures can be taken, such as predator/pest control and disease management. However, smaller steps can be taken in order to meet these other goals. We can start by educating and involving local communities and schools in order to raise awareness. The people of Hawaii should be aware of the things that are happening to an irreplaceable species and things they can do to save them. Not only that, but the detrimental factors that are killing the birds also negatively impact other species and even the human race. To conclude, we must take urgent measures to save this beloved species from extinction. Thank you for taking the time to take this urgent matter into consideration.

Sincerely, A concerned Iolani student

## References

A climate change canary in the coal mine- the endangered Hawaiian honeycreepers. (2022, May 25). USGS. Retrieved February 16, 2023, from <a href="https://www.usgs.gov/news/featured-story/climate-change-canary-coal-min">https://www.usgs.gov/news/featured-story/climate-change-canary-coal-min</a> e-endangered-hawaiian-honeycreepers

Derouin, S. (2016, November 18). The beloved Hawaiian honeycreeper birds are at risk of extinction from avian malaria. Mongabay. Retrieved February 16, 2023, from https://news.mongabay.com/2016/11/the-beloved-hawaiian-honeycreeperbirds-are-at-risk-of-extinction-from-avian-malaria/

Kaiser, S. (2016, September 21). Birds at the edge: The plight of the Hawaiian honeycreepers. Island Conservation. Retrieved February 16, 2023, from https://www.islandconservation.org/plight-of-the-hawaiian-honeycreepers/

Names, D. G. (n.d.). Hawaiian Honeycreeper. Finch Research Network. Retrieved February 16, 2023, from https://finchnetwork.org/species/honeycreepers

E mālama i kā mākou holoholona hihiu

# SAVE THE HAWAIIAN HAWAIIAN HONEYOREEPERS



Fewer than 2,000 Hawaiian Honeycreepers are left in Hawaii. This majestic species is slowly disappearing but with your help, we can save them from permanent loss. I am a member of 'Iolani School and I am asking for your help to save these beautiful birds before it is too late!

MAKES THE DIFFERENCE

## Dear Legislators,

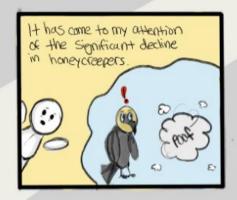
I am writing to support the Resolution recognizing August 8, 2023, as Hawai'i Honeycreepers Celebration Day. I firmly believe that this Resolution is essential to help protect the native manu of Hawai'i and to foster the deepening of pilina with the native manu.

Hawai'i is experiencing a bird extinction crisis, with 95 of its 142 endemic manu (bird) species have become extinct and the remaining 47 species facing critical threats. Of the more than 50 species of honeycreepers endemic to Hawai'i, only 17 remain, and 12 are currently designated as critically endangered or threatened. The threats to the remaining manu species, particularly honeycreepers, include loss of their feeding and nesting habitat, degradation of that habitat by invasive plants, insects, and even diseases such as Rapid' Ōhi'a Death, direct predation by invasive rats, cats, and mongoose, and deadly diseases spread by mosquitoes, particularly avian malaria. Since the introduction of mosquitoes in 1826 and the mosquito-spread diseases such as avian malaria and pox in the 1900s, the range of Hawaiian honeycreepers has shrunk mainly to the high-elevation cool forests. The warming climate enables mosquitoes to move into the remaining disease-free refuges at higher elevations. For most honeycreepers, one bite from a mosquito carrying avian malaria can result in death. We have estimated that many Hawaiian honeycreepers will go extinct within the next ten years if we don't control mosquito populations, don't manage predators better, and stop ongoing conservation efforts.

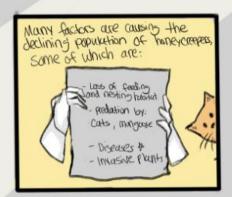
The Hawaiian honeycreepers, like all native manu species, are integral to the State's ecosystems and culture. The once intimate pilina (relationships and connections) between communities and manu have diminished due to their disappearance from the landscape. Community awareness and support are essential to the success of actions needed to mālama our native manu, particularly honeycreepers.

In conclusion, the Hawaiian honeycreepers, like all the manu species, function as pollinators, nutrient cyclers, seed cycles dispersers, and pest managers, keeping the forests of Hawai'i healthy and ensuring that the woods can function like a sponge to draw in, filter, and retain wai (water). Kanaka Maoli fosters reciprocal relationships with the native manu of Hawai'i and respects them as messengers between the akua (gods, elements in nature) and kanaka. I firmly believe that the Resolution recognizing August 8, 2023, as Hawaiian Honeycreepers Celebration Day is necessary to help protect the native manu of Hawai'i and to foster the deepening of pilina with the native manu. Therefore, I ask for your support for this Resolution.





















If we don't do anything about this, the honeycreepers will go extinct and this will significantly affect our ecosystem. We need to act fast!



## THE HONEYCREEPERS NEED OUR HELP

VOTE YES RECOGNIZING AUGUST 8 AS HAWAI'I HONEYCREEPERS CELEBRATION DAY





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ALL HONEYCREEPERS ARE CRUCIAL TO HAWAI'I ECOSYSTEMS AND CULTURE. THEY KEEP INSECT POPULATIONS LOW AND POLLINATE THE NATIVE PLANTS LIKE THE 'OHIA TREE.

## MOSQUITO



MOSQUITOS MOVE HIGHER
INTO THE MOUNTAINS,
SPREADING AVAIN
MALARIA AMONG THE
BIRDS, KILLING THEM.
WITHOUT THEM,
ECOSYSTEMS OF HAWAI'I
WILL COLLASPE.

## Dear Legislators,

Hawaiian honeycreepers have been in Hawaii for millions of years. They are the representatives of Hawaii. These beautiful birds were once thriving but since humans started inhabiting the island, the population has been slowly decreasing. In the current world, there are many factors that are causing these species to go extinct. Global warming and deforestation are causing these birds to lose their habitats. By dealing with global warming, saving these birds is another positive effect of Global warming. Honeycreepers are great pollinators and many plants would be losing a great pollinator. Since they have been around for a very long time they also have cultural importance and they brighten up Hawaii. The US government has described Honeycreepers as the "canary down the coal mine" to describe their role in highlighting the dangers of climate change. As the populations of Honeycreepers are sensitive to the changes caused by global warming, their populations are collapsing rapidly. For a long time, these birds have been troubled by mosquitoes. By staying near mosquitoes the birds were prone to contracting Avian Malaria. This drove these birds to go to higher altitudes to avoid the mosquitoes because mosquitoes couldn't go to areas with cold temperatures. As a consequence of global warming, these protected areas vanished and caused the birds to contract Avian Malaria again. By legislating the protection of honeycreepers, the government would be raising awareness of the consequences of global warming, and the honeycreeper could become a symbol of the fight against global warming and its consequences.

Honeycreepers evolved to pollinate the native plants of Hawaii, and it has been found that they show a preference for native Hawaiian plants, often ignoring introduced species such as food crops: they "tend to prefer the native flora, and...display strong morphological and behavioral adaptations to native plant species" (Kohala Center). By protecting the Honeycreepers with legislation, the government will also be protecting the native flora of Hawaii, preserving the beauty and unique characteristics of Hawaiian nature. If the honeycreepers, as a native pollinator, are replaced by non-native species, it is likely that the non-native species will show a preference for non native species of flora, which will then dominate the Hawaiian ecosystem. In other words, both Honeycreepers and the native flora that rely on them for pollination would be lost.

By legislating to protect Honeycreepers, the government will be legislating to protect a unique and priceless source of Hawaiian culture. The Honeycreeper's colorful appearance and distinct singing voice has shaped Hawaiian mythology and tradition. The reduction in numbers of the bird threatens the natural link between the Hawaiian ecosystem and the culture of the Hawaiian people. For example, Hawaiian featherwork, which is the weaving of feathers into intricate and delicate cloaks and other wearable pieces such as helmets, has played a significant role in Hawaiian culture for thousands of years. The feathers used to create these beautiful pieces are the Honeycreepers (Forest Bird Recovery Project). Furthermore, the Honeycreepers' voice has shaped Hawaiian mythology and folklore. For example, Laieikawai who lives on the wings of supernatural Honeycreepers, and in the Hawaiian creation chant, the Kumulipo. The retelling of these stories would feel hollow and hypocritical if the Honeycreepers' voice could no longer be heard in the forests and around the homes of the Hawaiian people. It would be shameful to claim to care about Hawaiian culture and spread such stories at the same time as allowing the inspiration for those stories to go extinct (Forest Bird Recovery Project).

Hawaiian Honeycreepers are in critical conditions. Already many species of these birds have gone extinct and there are more to follow if no actions are taken. Millions of years ago there were a surplus number of them and today, people would be lucky to even see one. By dealing and regulating global warming will help birds stay safe from Avian Malaria and if these birds go completely extinct, Hawaiian plants would be losing an important pollinator. Finally, these birds have lots of cultural importance because they have been around for a very long time.

Please considering saving the Hawaiian Honeycreepers Legislators and thank you.

Sincerely, a 9th grade student from Iolani.

## Sources

A Climate Change Canary in the Coal Mine - The Endangered Hawaiian Honeycreepers | U.S. Geological Survey. (n.d.). Www.usgs.gov.

https://www.usgs.gov/news/featured-story/climate-change-canary-coal-mine-endangered-hawaii an-honeycreepers

Cultural Significance. (2018, February 22). Maui Forest Bird Recovery Project.

https://www.mauiforestbirds.org/cultural-significance/

Pollinators in Hawaii. (n.d.). https://kohalacenter.org/docs/resources/hpsi/PollinatorsInHawaii.pdf



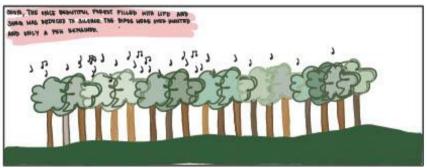




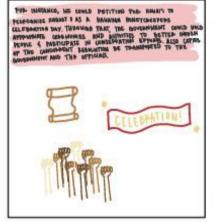




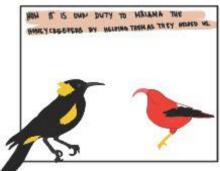












## Dear Legislators,

As a young native Hawaiian and current 9th grade student at Iolani, I am writing to urge your support for the resolution which aims to protect the honeycreepers in Hawai'i. The honeycreepers hold a special place in my heart as a native Hawaiian, and as someone who has a deep connection to the land and its history. I am reaching out to you to emphasize the urgency of this situation and to ask for your help to protect these species from going extinct.

The evidence regarding the state of honeycreepers in Hawaii is alarming. According to recent studies, there are more than 50 species of honeycreepers endemic to Hawaiii, but only 17 species remain, and 12 of those are designated as critically endangered or threatened by the federal or state government. This means that the majority of these birds, which are unique to Hawaiii, are on the brink of extinction. If we do not take immediate action, the honeycreepers will be lost forever.

The decline of honeycreepers is a complex issue that has been driven by factors such as habitat loss, invasive species, and climate change. The resolution you are considering is a crucial step towards protecting these birds and their habitats. If this resolution is created, we can put coordinated conservation efforts, which will help to increase the population of honeycreepers, create new habitats, and protect existing ones. It is crucial that we act now to protect this important species, not only for their intrinsic value, but also for their role in maintaining the balance of Hawaii's unique ecosystem.

In conclusion, I hope you support the resolution and take action to protect the honeycreepers in Hawaii. The decline of these birds is a problem that affects us all and it is up to us to take action to protect them. I urge you to pass this resolution and support the preservation of the honeycreepers and their habitats. Thank you for considering my request, and for taking the time to read this critical issue.

Mahalo,

## **SCR-114**

Submitted on: 3/27/2023 10:14:57 AM

Testimony for TCA on 3/28/2023 3:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Wendy Kuntz Hood	Individual	Support	In Person

## Comments:

This measure has helped to engage our local students in conservation, culture, and science.

I encourage you to support recognizing AUGUST 8, 2023, AS HAWAIIAN HONEYCREEPERS CELEBRATION DAY.

Mahalo

## **SCR-114**

Submitted on: 3/27/2023 1:31:02 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
lukanicole zavas	Individual	Support	In Person

## Comments:

Aloha Chair Lee, Vice Chair Inouye, and members of the TCA committee,

I **support SCR114 and SR104** to recognize August 08th as a day to Celebrate Hawaiian Honeycreepers.

Hawaiian honeycreepers are a group of small manu that are native to Hawaii and are found nowhere else in the world. They play an essential role in the ecosystems of Hawaii as pollinators and seed dispersers and are also culturally significant to kānaka māoli. Unfortunately, many people living in Hawaii do not have a relationship with these manu, due to many of these manu being on the brink of extinction.

By celebrating Hawaiian honeycreepers on August 08th, we can help raise awareness about these manu and their threats, including habitat loss, disease, and predation by introduced species. We can also honor the efforts of the kia'i that work hard to protect and restore Hawaiian honeycreepers and their habitats.

Furthermore, this celebration can help promote education about the unique natural history of Hawai'i. By learning about and appreciating these manu, we can develop a deeper pilina with these manu and a greater appreciation for the importance of conservation efforts - such as mosquito control.

In conclusion, please **support the resolutions SCR114 and SR107** to celebrate Hawaiian honeycreepers on August 08th to raise awareness and deepen our pilina with these amazing manu!

Mahalo nui for your time,

Luka

'Āhuimanu, O'ahu

## **SCR-114**

Submitted on: 3/24/2023 2:59:26 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Testify
Julia Diegmann	Individual	Support	Remotely Via Zoom

## Comments:

Aloha Chair Lee, Vice Chair Inouye, and Members of the Senate Transportation and Culture and the Arts (TCA) committee,

I am submitting testimony in STRONG SUPPORT for resolutions number SCR114 and SR107.

Our native Honeycreepers are foundational to the culture, forests, and ecosystems of Hawai'i and they are disappearing at an alarming rate. On the island of Kaua'i, we have already lost dozens of forest bird species due to avian diseases transmitted by non-native mosquitoes, among them iconic species like the Kaua'i 'ō'ō, featured in mahiole and 'ahu 'ula, and the spectacular Kaua'i 'akialoa, a pollinator of 'ōhi'a lehua and insect eater. We are grieving the loss of their song, the loss of their beauty and the loss of their presence.

Today, more voices in our forests are vanishing: of the six remaining Honeycreepers species on Kaua'i today, two are critically endangered. The 'akikiki is going extinct in the wild as you are reading these lines and the 'akeke'e is predicted to go extinct in the wild within the next couple years.

A statewide Hawaiian Honeycreepers Celebration Day would provide an opportunity to give these species a voice. It would help to raise awareness with residents and visitors about the ongoing extinction crisis, strengthen our relationship with our native forest birds and highlight the tremendous work our conservation community is doing statewide to fight not only the imminent extinction of these species, but also to fight the misinformation being spread about proposed conservation efforts.

Please support these resolutions.

Mahalo.

Dr. Julia Diegmann

Kalāheo, Kaua'i

The Senate
Committee on Transportation and Culture and the Arts
Tuesday, March 28, 2023 3:00 PM
Conference Room 224 & Videoconference
State Capitol 415 South Beretania Street

## **Testimony IN SUPPORT of SCR114**

Aloha Chair Lee, Vice Chair Inouye, and members of the committee. My name is Kailee Lefebvre and I am IN SUPPORT of SCR114 Recognizing August 8, 2023 as Hawaiian Honeycreepers Celebration Day.

I've lived on Oahu my entire life and up until last year I could only name one native Hawaiian forest bird species. I grew up in Honolulu and spent a lot of time outside in my backyard but am ashamed at how disengaged I was from our natural areas and native species.

Since then, I studied tropical plants at UH Manoa and have been working in conservation for the past 10 years. When my supervisor asked me to engage with haumana to learn about the legislative process and advocate for native Hawaiian honeycreepers, I was thrilled. This project gave me the best reason to finally learn about the honeycreepers and how to help save them. Offering kumu and haumana the opportunity to learn about their invaluable role speaking up for themselves and their environment has also helped me realize how important saving our manu are to not only them, but many in their communities. The haumana and kumu have been incredibly eager to learn about the honeycreepers, the threats they face, and ways to help them. Some classes have gone above and beyond helping our manu by starting fundraisers, raising awareness in their communities, and conducting related science projects. They have been especially excited to submit their testimonies pleading with you to help save our manu. Their passion shines through the words of their testimonies, poems, and art. Their efforts have been inspiring.

There was an emotional public meeting of the Board of Land and Natural Resources on March 24, 2023 where they discussed a possible mosquito control effort to help save manu on Maui. This included a number of powerful and heartfelt testimonies which brought not only testifiers but also board members to tears. Whether in favor or opposed to the project, it was undeniable to all how dire the need is to do something and how important and loved manu are to the people of Hawai'i.

I am proud to say that I'm building pilina with our manu and intend to make up for time lost appreciating and trying to save them. I dream about the day that manu are so prevalent that we don't feel the disconnect that I once felt and instead can see and hear them often so that we all can build that pilina and celebrate them year-round. I ask for your support in passing this resolution.

Mahalo for your time and consideration,

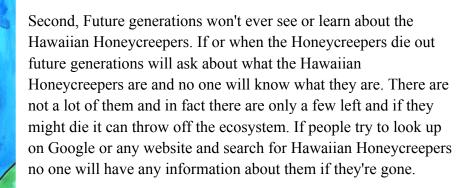
Kailee Lefebvre Kailee.h.lefebvre@gmail.com (808) 726-0181

## **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August the 8th, 2023 Hawaiian day. First of all, They were important to Hawaiian culture and were used for the kings and queens. Their feathers were made for the Hawaiian lei that women would wear. Their feathers were made

to make helmets for Hawaiian culture, and lastly their feathers were used for capes that the men would wear.



Lastly, Without them the ecosystem would collapse. The famous Ohia tree would die because if the Hawaiian Honeycreeper are gone the ohia tree will have no animal to pollinate it. Their home is also the Ohia tree and if there are no Ohia trees then the beloved Hawaiian Honeycreepers will be in danger. Then also if the Hawaiian Honeycreepers die then the animals that depend on it like the bugs will overpopulate and that would be very bad.

In conclusion Hawaiian Honeycreepers are important because they help others remember they are a part of Hawaiian culture and they also help keep the ecosystem in place like pollinating the Ohia trees. The Hawaiian Honeycreepers are very important to the people and to the ecosystem so we would like a day about the Hawaiian Honeycreepers.

Sincerely,
Daysha Angeles
Grade 5
Mānoa Elementary School

## **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,



I strongly support the resolution **SCR114** to make August 8, 2023 Hawaiian Honeycreeper Day.

To begin with I support this because without them our ecosystems could collapse which means there could be no plants for animals to eat and that could lead to loss of animals and loss of fruits and or food.

In addition, future generations would not be able to see or learn about them if our generation doesn't take care of them which means we wouldn't know about them and we couldn't learn about them in the future. The future also wouldn't know from our mistakes, plus there would be more non-native animals.

Finally, the Honeycreepers helped with native plant growth and those plants are key to watershed health which means there would be loss of forests, overflowing of water, and loss of native flora.

Therefore, all of this could be avoided if we take care and treat the Hawaiian Honeycreepers right and give them the respect they deserve.

Sincerely, Amelia Barnett Grade 5 Mānoa Elementary School

## **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8, 2023 Hawaiian Honeycreeper day. Firstly, Honeycreepers help with the native plant growth and those plants are



key to the watershed's health. Honeycreepers help us pollinate Ohia which are one of the native plants that are good for the watershed's health. If we can stop threats to the honeycreepers like mosquitos we can save native plant growth and watershed health.

In addition, future generations will never see them or get to learn about them if they aren't cared for. There are now less than ½ of the honeycreepers that once lived. Honeycreepers are endemic which means they only live in certain places like Hawaii. It's sad if they go extinct because honeycreepers are symbols and are very important to Hawaiian culture. Honeycreeper feathers are a symbol of power. Honeycreepers used to be caught for their

feathers and used for capes and helmets.

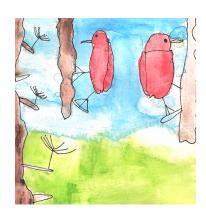
Finally, without them native ecosystems could collapse. Honeycreepers are important because of what they do to our environment. If we can increase the honeycreeper population we will be able to have these birds for much longer and help the ecosystem by pollinating. As you can tell, honeycreepers can help us with native plant growth, making the native ecosystem stronger, and help us so future generations can see and learn about it.

Sincerely, Cody Burigsay Grade 5 Mānoa Elementary School

## **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

To begin with I strongly support the resolution SCR114 to make this summer August 8



2023 Hawaiian Honeycreeper Day. Firstly, future generations may not be able to see the birds that we have, so we have to protect the Hawaiian honeycreeper. The Hawaiian honeycreeper is important for history and ancestors. In addition the Hawaiian honeycreeper is endemic and only found in Hawaii so that means there are barely any of them left because they are only found in Hawaii and not other places.

If we raise awareness then the community can help support the Hawaiian honeycreeper by doing captive breeding. We can do that by gathering money from the community to help support the

captive breeding for the Hawaiian Honeycreeper and save them from the mosquitos. It is important to do captive breeding because we can breed them and make more and then send them out to native forests. We as a community should support Hawaiian honeycreepers because future generations won't be able to see what we see in the present.

Next, the native birds are important to the diversity; without them the collapse of native forest ecosystems could happen. The native birds are important to the endemic Ohia tree because the Hawaiian honeycreeper pollinates the Ohia tree. When a hawaiian honeycreeper pollinates a ohia tree it takes its pollen it gives the pollen to another tree and the tree that receives it makes more ohia trees. Without the native forest there will be fewer habitats for the populations that are left. Furthermore, the Ohia trees are helpful to the environment because they help collect water in our watersheds which also means they have a connection to the water that we use to drink today.

As you can see, we should all help protect native birds because without them lots of bad things happen, future generations won't be able to see them, native forests could collapse, and the trees that help the watershed could suffer.

Sincerely, Austin Chun Grade 5 Mānoa Elementary School

## **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,



I strongly support the resolution **SCR114** to make August 8, 2023 Hawaiian Honeycreeper day. Honeycreepers are important because they help grow plants that help the watershed. They're important to ecosystems, and important to Hawaiian culture. To start with, Hawaiian Honeycreepers help grow plants that help the watershed. They help pollinate Ōhi'a lehua which helps collect fresh groundwater for our watershed. Furthermore, they are important to the ecosystem because if they die out a huge part of our natural ecosystem and culture will too. Out of 50 species, only 17 species are left. Last but not least They are important to Hawaiian culture because their feathers were used to make capes for ali'i, and were seen as spiritual guides or *aumakua*. In conclusion, why I think we should have a state Hawaiian honeycreeper day is because they need to be

recognized. They do so much for the environment like helping grow plants that help the watershed, and they deserve to be cared for.

Sincerely, Michael Fujimoto Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly agree with **SCR114** that we should make August 8, 2023 Hawaiian Honeycreeper Day because if not, future generations won't see or learn about the honeycreepers,



the native ecosystems will collapse, and we must remember that these birds are important to the biodiversity of our forests.

To start, future generations may never see or learn about these birds because these birds are native to here and they are endemic. These species are also endangered meaning that the population of these birds are very low. If these birds are gone, the future generations wouldn't know that these birds existed.

Furthermore, these birds also help our native ecosystems and they keep it alive. There might be native plants and animals to the ecosystems too and might not be found anywhere else. If these birds are gone, the native plants might go extinct, then the animals that eat those plants will go extinct, then the habitat/ecosystem might not be a good place to live in for the animals and thus the habitat/ecosystem will collapse.

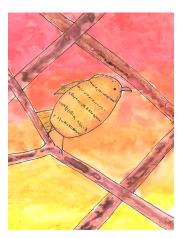
Finally, The biodiversity of our forests is what makes our forests unique. Several plants depend on these honeycreepers and some of these plants might be endemic to Hawai'i. Since some of these plants or animals might be endangered, they might depend on honeycreepers to try and keep them alive. If the honeycreepers are gone, those plants and animals that depend on the birds might go extinct and researchers won't have evidence that the species existed. Therefore, we should take care of the Hawaiian Honeycreepers and protect them so that they won't go extinct and thus making August 8 Hawaiian Honeycreeper Day.

Sincerely, Kylie Fukunaga Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8, 2023 Hawaiian Honeycreeper Day! To begin with, They are so important to Hawaiian culture. The Hawaiians used the feathers of the birds



have thus been used in the Hawaiian traditions to create leis and adorn cloaks and helmets for nobles. They used these honeycreepers because certain honeycreepers serve as kinolau, or physical embodiments and representatives of ancient Hawaiian deities. They found the Hawaiian Honeycreepers when a kupuna came to visit Maui, he called the birds to soar over and sing, eventually letting the other kupuna and the people see their beauty. The 'I'iwi (Scarlet Hawaiian Honeycreeper) symbolizes hawaii. They are the third most common native land bird on the Hawaiian Islands. There are some large colonies of these birds in Hawaii and Kaui and there are smaller colonies on Molokai and Oahu. Which leaves an estimate of there being 350,000 of the 'I'iwi left.

Moving forward, without them some ecosystems could entirely collapse leading to extinctions of many other native plants and animals of Hawaii.

Another big problem is climate change. Now that some areas of the forests are warmer due to climate change it is allowing mosquitos to reach areas that were once avian malaria-free now infecting many species of animals and reptiles. Since the mosquitoes are sucking the blood from their eyes it is leaving the birds to be permanently blind which is causing them to get killed by predators or fly into trees and die. We need to bring more awareness to this disease and support ways to fight the mosquitoes.

Last but not least, It is important that future generations know about these birds and that they try to make an effort to bring them back. It is important for children of Hawaii to know about the birds and how they are a part of our culture and ecosystem. Some ways we can prevent these birds from going extinct is by bringing birds into captivity until mosquito control is achieved and using conservation translocation to move birds from forests threatened by avian malaria to disease free areas. If we get their numbers back up the thing that could bring them back down is avian malaria caused by global warming since it is getting warmer it is allowing mosquitoes to come to higher areas in the rainforests. But, if the community does not know about the problem we won't be able to solve it.

Although there are not many of the birds left, and it will be hard to bring them back, if we make a great effort to try, I believe that one day I, and future generations to come will get to see them soar high in the sky once again.

Sincerely, Cade Hara Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8th, 2023, Hawaiian Honeycreeper Day.



Firstly, I support this idea because they are extremely important to the biodiversity of our native forests. They evolved from the Asian Rose Finch into over fifty different types of honeycreepers. Now there are only seventeen out of fifty types left. They are found in Uka, the mountains, Ula, the lower part of the valley, and Kai, the ocean. And, fun fact, the honeycreepers actually evolved to mimic the shapes of the native flowers used by the honeycreepers to live and survive if not off of bugs.

In addition, without them, the huge parts of our native ecosystems will collapse. We will lose our native forests that are slowly thriving beautifully, we will have too much water and less of a smooth watershed. One of the worst parts of this is we will have less biodiversity. The reason why it is so

important is because some of the forests are popular tourist sights and it has almost every color in the rainbow which makes the mountains so majestic.

Moreover, these amazing birds are *very* important to Hawaiian culture. Cultural clothing made with the feathers of honeycreepers were meant to represent them. The birds would be a signal of messages or sometimes the *aumakua*, or guardian angels of people. Since the birds would help to pollinate our native flowers, the people of Hawaii would make fragrant flower lei with the bird's help.

Therefore, without the help of us humans and the special qualities of the honeycreepers, we will lose our biodiversity, the importance to Hawaiian culture, the understanding of the birds, and worst of all, our wonderful home the ecosystem has given to us.

Sincerely, Erielle Ho Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution SCR114 to make August 8, 2023, Hawaiian



Honeycreeper day. strongly support this because they need to be known about.

To begin with, the Hawaiian Honeycreepers are important to the biodiversity of Native Forests. The Honeycreepers help pollinate the flowers in the Native Forests which helps more native plants grow. To this day, only 17 species or less out of 50 original species are left. Honeycreepers play an important role in balancing native ecosystems and help control there being too much of what they eat. If more of the Honeycreepers go extinct there might be tons of the insects that they ate.

In addition, future generations will never get to see/learn about the Honeycreepers if they are not cared for. For example, I have never seen a honeycreeper before, but I hope I will get to see one soon. This would also affect a cultural aspect because people would not know how the capes, helmets, and staffs that are a part of Native

Hawaiian culture. If we don't give these birds recognition not a lot of people would know about them.

Last but not least, without the Honeycreepers, native ecosystems could and would collapse. This is because the birds let us know if the forest is healthy. They do this by getting enough food, which tells us that the forest is healthy. If the Honeycreeper disappeared then the trees would not get pollinated so they could make seeds which would make the forests disappear and then after that erosion would destroy the islands.

Therefore Hawaiianhoneycreepers should have recognition they deserve so more people will get the chance to learn about them, can help save them, and so we can hopefully kill the mosquitos that are preying on them.

Sincerely, Jett Ikeda Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I believe we should support the resolution SCR114 to create a day to recognize Hawaiian



Honeycreepers. They are important to the biodiversity in our native forests and there are only 17 different species of honeycreepers on our islands left. That means that we only have 17 different honeycreepers to pollinate our native plants. This is the only bird that can eat māmāne so if it goes extinct the māmāne won't pollinate and māmāne would go extinct too. Honeycreepers evolved up to 50 species but only 17 different species survived and there are not very many birds in those species left today.

In addition, they help the native plants grow. One way is to eat bark off of a tree to help growth of itself and the tree. Furthermore, they eat some native plants to help them pollinate and grow. Without these birds, plants that are important to our islands won't grow.

Last but not least, they are very important to Hawaiian culture.

Their feathers were used for helmets, leis, and a kahili staff. They also inspired mele, hula, oli, and mo'olelo. Out of 50 different species of honeycreepers, only 17 survived, and 12 are on this island.

Therefore, the 50 different species of honeycreepers that were evolved are dead except for 17. We need those honeycreepers to pollinate our native plants. Honeycreepers have inspired mele, hula, oli, and mo'olelo. They provide a lot of things for our ecosystem and our culture and history as well.

Sincerely, Aizen Kanno-Tadena Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support **SCR114** and believe that Hawaiian Honeycreepers should have their own state day. They need their own state day because they are important to Hawaiian culture, they are going extinct, and without them native ecosystems would collapse.

To begin with, Hawaiian Honeycreepers are important to Hawaiian culture. They are very important to Hawaiians because they are symbols of power and spiritual protectors of many Hawaiian families. Native Hawaiian kings even wore coats out of their feathers. When they made those coats they only took 1 feather out of each bird. One feather!

Another reason we need a state Honeycreeper day is because unless we take action Hawaiian Honeycreepers will go extinct. Hawaiian Honeycreepers are currently getting closer to extinction at an alarming rate because of avian malaria being spread by mosquitoes. Before, the mosquitoes couldn't really harm the honeycreepers but now because of global warming they are doing significant damage. You can see the effect of that in how the population of Honeycreepers have decreased by 98% in the last 15 years and scientists believe that unless we intervene, they will go extinct within 10 to 30 years. If we successfully protect the Honeycreepers then future generations will learn from it and protect other species too.

Finally, without the Honeycreepers native ecosystems will collapse. If they go extinct, the Ohia Lehua, a plant only honeycreepers mostly pollinate, will also die out. If the Ohia Lehua dies out the watershed will collect less water after rain storms. If there is less water then other native plants will also die out but the sturdy invasive weeds will still live.

In conclusion, we should have a state day to recognize the Hawaiian Honeycreepers because they are important to Hawaiian culture, they are going extinct, and without them native ecosystems would collapse.

Sincerely, Kento Maruo Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8, 2023 Hawaiian Honeycreeper day. I support the resolution for these reasons: they help with the biodiversity, native ecosystems could collapse without them, and they are important to Hawaiian culture.



To begin with, Honeycreepers help with the biodiversity in the native forests. They keep the insect population in check by eating them. The Honeycreepers also facilitate the growth of native plants. Another important job they do is tell you how healthy the native plants are.

In addition, they keep native forests from collapsing. If the honeycreepers go extinct some certain plants would die and those plants could be important. It would cause certain animals to die because the certain plants would die. All the habitats for the animals and plants would all disappear because they are all linked. Last but not least, they are very, very important to Hawaiian culture. They were traditionally prized for their feathers, and important Native Hawaiian essentials like capes, helmets, leis, and hair ornaments couldn't be made without them. These accessories are very important to

Hawaiian culture because they are a part of their culture. We must protect these birds as they were important to the first people of our islands.

In conclusion, honeycreepers help with our biodiversity, without them our forest would die and they are very important to Hawaiian culture. They deserve to be recognized so many others can understand their importance to Hawai'i.

Sincerely, Matthew Miura Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8, 2023 Hawaii Honeycreepers Day.

To begin with they are very important to Hawaii culture because their feathers were used for capes in old Hawaiian times. Also, they kept native plants alive, and they kept the Ohia tree alive as well which plays an important part in our watershed's health. Furthermore without the



Honeycreepers, the Native ecosystem would collapse because if they die other native animals and plants would soon follow, and eventually there may come a day when there are no native plants or animals left.

Furthermore, they help with native plants because they pollinate some native plants, and they are the key to the watershed because of the ohia tree they pollinate. These trees help absorb water and help prevent erosion; without them the Honeycreepers our forests may be at risk and many plants would begin to die off.

Last but not least, they are important to Hawaiian culture because they were traditionally honored for their feathers

which Hawaiians used for capes. So they hold a special place in our culture as well. So with all these reasons you should also support us and join to fight to keep the Honeycreepers alive by making a day to honor the Hawaiian Honeycreepers so we can appreciate these amazing birds for years to come.

Sincerely, Lael Moreno Grade 5 Mānoa Elementary School

## **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8 2023 Hawaiian Honeycreeper day because Hawaiian honeycreepers are very important culturally and have a strong place in the ecosystems of hawaii.



Firstly without them native ecosystems could and would probably collapse. In addition native plants depend on the honeycreepers for pollination. This means without the Hawaiian Honeycreepers native plants may slowly die off, and insect populations could get out of control without the birds that eat those types of insects. Insects on the branches of native trees and larva on the forest floor can both become overpopulated if Hawaiian honeycreepers end up going extinct.

Secondly the future generations of people will never get to see or learn about them if they aren't cared for and protected. In addition people may forget that the Hawaiian honeycreepers ever existed because they are extinct. Hawaiian honeycreepers are very special to Hawaiian culture. So if the hawaiian honeycreepers are gone some of the details and stories in Hawaiian culture may no longer make sense if these hHawaiian birds go uncared for. People may not ever get to see the beauty of these birds and their feathers. People may

want to see the Hawaiian Honeycreepers in action and may become interested in them, but without them around that interest in culture and science may be altered and eventually extinct.

Thirdly the Hawaiian Honeycreepers are extremely important to the background and history of hawaii. Moreover, these Hawaiian birds were used to be known as symbols in stories and were known as important because of their feathers. Red honeycreepers were used for their feathers. These were used to make clothing that was very important to Hawaiian culture. The red hawaiian honeycreepers were known as sacred because their feathers were used to make clothing worn to battle or special ceremonies. These pieces of clothing also became a mark of society ranking. Some stories had been made about these Hawaiian honeycreepers. These stories are called mo'olelo and are extremely important to Hawaiian culture. Without these birds so much history and culture would have to be known as more in the past then the present.

In conclusion, culture, plants, and ecosystems can be changed if we don't remember that these birds need help and are getting close to becoming extinct.

Sincerely, Madisyn Nakano Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support the resolution **SCR114** to make August 8 Hawaiian Honeycreeper day. To begin with we should make this day Hawaiian Honeycreeper day because future generations will not get to see it if it isn't cared for. Here are my reasons. They should be cared



for more because the next generation can learn about their history and how their ancestors lived. The Honeycreepers need more public awareness so people will know about their struggles and put more effort into keeping them alive. People should know more about the honeycreepers because they are almost extinct. To add on to the last sentence, in the past fifteen years the population decreased by 98% because people didn't know how much they were struggling.

Furthermore they are important to the biodiversity of our native forests. Invasive species are destroying the watershed, and the native honeycreepers can help with that by taking care of the plants that are most important to the care of the watershed. If the honeycreepers die the whole ecosystem will fall apart. When the ecosystem dies the culture is lost and people would never know how their culture was. The Hawaiian Honeycreepers can pollinate

the Ohia Lehua and if the pollinators are gone, the plants will be gone too. The Ohia tree has a very important role in keeping the watershed alive and working.

Lastly, Honeycreepers help the native plants and animals. They help by keeping the population of everything in balance. They do that by pollinating plants that other animals need to survive. If they die the native plants will die and then soon all the native plants/animals will die. Finally they can do things that other animals can't.

Therefore Honeycreepers can help pollinate endangered plants, and future generations can see/learn more about their culture and how their ancestors live, and they will keep the watershed in order.

Sincerely, Ezra Parker Grade 5 Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support resolution **SCR114** to make August 8, 2023 "Hawaiian Honeycreeper Day!" Firstly, I support this cause because they are a key part of Hawaiian Culture. Culture-wise,

they are symbol messagers, and many believe when they behave in a certain way this tells us something is off, or abnormal.



Moving on, without them our native ecosystems could collapse. This could happen because an ecosystem consists of many abiotic and biotic factors that are all used to make an ecosystem run properly. Some biotic or abiotic rely on each other to survive. As without one part of the whole system the whole system could fall down like blocks stacked on an unstable tower.

Moreover, honeycreepers help with native plant growth. To add on, the (native) plants are key to watershed health, and honeycreepers play important roles as pollinators. There are many consequences of fewer honeycreepers, but one important one

could even be less fresh water to drink and use. In conclusion honeycreepers impact our ecosystem, community, and shouldn't be extinct. This is why we need to bring awareness to the dangers they face and help them.

Sincerely,
Zoe Ranchez
Grade 5
Mānoa Elementary School

# **Testimony in Support of SCR114**

Dear Chair Lee, Vice Chair Inouye, and Members of the Committee,

I strongly support resolution **SCR114** to make August 8, 2023 Hawaiian Honeycreeper Day. Let me start by talking about Honeycreepers, what they do for us, what they do for our environment, and how we should do something in return for them.



First off, without honeycreepers native plants won't grow because they need to be pollinated in order to thrive and reproduce new seeds so new generations can see them in the future. Many insects and other species help pollinate flowers and other native plants, but some native plants just can't survive without Hawaiian Honeycreepers to pollinate them. The ecosystem has a course, if one creature dies out, and more of those species fall, the plants and other animals that depend on the species, they will die and so on. Once one species runs out, more and more of Hawai'i's precious life will eventually be gone except for the ones kept away and isolated from the outside world. They would all be extinct in the wild, so why not recognize these birds now, to help stop the lack of these magnificent Hawaiian Honeycreepers.

Moreover, they have a close connection with our watersheds! In order for our watershed to thrive and keep producing freshwater, the Hawaiian Honeycreepers need to be here because they keep our other native plants alive. Those plants hold up all of the mud and rain from coming down the mountain so the watershed cycle can run its course, and so the ocean and coral doesn't get covered up. Otherwise, it would happen again, more native plants, fish, animals, mammals, and more would begin to disappear, like how Hawaiian Honeycreepers are doing now.

Last but not least, Hawaiian Honeycreepers are very important to Hawaiian culture because they were used to create ali'i staff, capes, clothing, and more. But if we don't have any of the Hawaiian Honeycreepers anymore, people from all over will not know what or where all of it came from, because there would be none left. These birds are still so significant to Hawaiian culture.

In conclusion, I really believe everyone should get to recognize these birds, and do something to at least help them. Even if it takes one small step like picking up after yourself, or recycling cans, to even just a tiny little step to saving these birds, it just matters how many people will take those steps. Thank you.

Sincerely, Ailee Uyechi Grade 5 Mānoa Elementary School Date: March 27, 2023

To: The Honorable Senator Chris Lee, Chair

The Honorable Senator Lorraine R. Inouye, Vice Chair

Members of the Senate Committee on Transportation and Culture and the Arts

From: Tiffany, 'Iolani school

Re: Strong Support for SCR 114 and SR 107

Hearing: March 28, 2023

# Dear Legislators,

I am Tiffany, a student at Iolani School, and I was born and raised in Hawaii and was taught some Hawaiian at my elementary school. Therefore, its culture and the conservation of it still means a great deal to me. Also, thank you for the opportunity to submit testimony in support for SCR 114 and SR 107, which will grant special status to the honeycreepers in Hawaii.

First of all, I would like to state the cultural significance of the Hawaiian Honeycreepers. The great impact the birds have on the Hawaiians is shown through the mo'olelo, 'ōlelo no'eau, ka'ao, and mele. Because of this, the endangerment of the Hawaiian Honeycreepers is not a situation that should be ignored and put aside, especially since Hawaii is our home. This means that we are responsible for protecting its culture by taking action in saving the birds that are mentioned in many forms of Hawaiian culture. If the Honeycreepers are not saved in time, stories, poems, and songs that emphasize the birds' cultural impact would most likely be forgotten. And may I remind you that these native birds are not only a part of Hawaiian culture, but also a part of Hawaiians' identities, therefore this issue should be taken more seriously.

Not only should this bill be passed due to the Hawaiian Honeycreepers' significance in Hawaiian culture, but also because of the extremely harmful effect avian malaria, climate change, and other causes of extinction has on the birds. For background information, avian malaria, carried by mosquitoes, is a highly infectious disease to birds. And because of the warming climate, the remaining disease-free refuges of higher elevations, which are the Honeycreepers' habitats, are becoming more suitable for these dangerous mosquitoes, killing off the Honeycreeper population. To support this, since the early 1900s, the Honeycreeper population reduced from fifty species to only seventeen species, twelve of them listed as endangered, which is only forty percent of the original number of species. In addition, there is currently no treatment for the disease, which would result in the birds' population to continue declining at an very alarming rate. If we do not take action, sooner or later, all of the Hawaiian Honeycreepers species will go extinct.

Lastly, the Hawaiian Honeycreepers should receive more protection and support because they play an important role in stabilizing Hawaii's ecosystem. Hawaiian honeycreepers serve many purposes, including as pollinators, nutrient cyclers, seed dispersers, and pest managers. Two of these purposes are functioning as pollinators and seed dispersers. This stabilizes the Hawaiian ecosystem because, during the process of seed dispersal and pollination of transporting plant seeds for germination and transferring pollen for fertilization, they are facilitating the growth and health of native plants.

In conclusion, Hawaiian Honeycreepers' cultural significance, exposure to extreme danger, and role in stabilizing Hawaii's ecosystem are reasons why I strongly support SCR 114 and SR 107. It is for these reasons that I urge your support for this bill to protect the Hawaiian Honeycreepers. Thank you.

Mahalo, Tiffany, 14 'Iolani School Honolulu Date: March 27, 2023

To: The Honorable Senator Chris Lee, Chair

The Honorable Senator Lorraine R. Inouye, Vice Chair

Members of the Senate Committee on Transportation and Culture and the Arts

From: Robyn, 'Iolani School

Re: Strong Support for SCR 114 and SR 107

Hearing: March 28, 2023

Dear Legislators,

Thank you for the opportunity to submit testimony in SUPPORT of SCR 114 and SR 107 which will provide a day to honor the honeycreepers.

This is important to me because in Biology class, we have been learning about the honeycreepers and how they are becoming endangered and extinct. This information has led me to realize how much danger the honeycreepers are in right now and that more people should become aware of this. The honeycreepers are keystone species in certain ecosystems which means that they are key in keeping an ecosystem stable. For example, the 'I'iwi bird drinks the nectar from the 'ohi'a and the lobelia flowers with its curved beak. This also pollinates the flowers so that the plants can reproduce.

The honeycreepers are a group of birds that are important to the native islands. They help to not only keep the ecosystem stable, but are also a representation of the past Hawaiian culture. If this is approved, this can bring awareness to the people that these honeycreepers are important, and that we should try and put more effort into saving them.

Mahalo, Robyn, 14 'Iolani School Honolulu, HI Date: March 27, 2023

To: The Honorable Senator Chris Lee, Chair

The Honorable Senator Lorraine R. Inouye, Vice Chair

Members of the Senate Committee on Transportation and Culture and the Arts

From: Jules, 'Iolani School

Re: Re: Strong Support for SCR 114 and SR 107

Hearing: March 28, 2023

Dear Legislators,

Thank you for the opportunity to submit testimony in **SUPPORT** of SCR 114 and SR 107 which will help protect and preserve Honeycreepers.

I strongly support SCR 114 and SR 107 because of the ecological and cultural importance honeycreepers have in Hawaii.

As someone who cares very much for the health of these honeycreepers and the effects that might be brought on their extinction, I am writing this to you in hopes of bringing this very devastating problem to your attention in order to fix it. This is crucial as, if it is not fixed fast, there will be harsh effects, such as losing an important part of Hawai'i's culture and a collapsing ecosystem on our hands. The honeycreepers have been a part of Hawai'i's culture for a very long time and having those relationships taken away can take a lot away from our relationship with the history of this island. Honeycreepers can also not be replaced, making it so that its niches can no longer be carried out (leading to the fall of Hawai'i's ecosystem).

Native Hawaiians have a deep connection with Hawaiian birds and honor, refer, and deify them as family, guardians, spirit, ancestors, and gods. Hawaiians have had these connections for centuries and it would be calamitous for those relationships to be taken away. Honeycreepers have a unique place in Hawaiians' hearts playing a big role in their culture. Their feathers were used in various items such as leis, cloaks, capes, helmets, and kahili being used as a symbol for power, rank, status, and wisdom, being worn by the high chiefs (who were considered to be descended from the gods). I am not Hawaiian myself, but being born and raised in Hawai'i has made me really care for Hawaiian culture. Overall, my point is that we have had a close relationship with these honeycreepers for a really, really long time. To lose this relationship that we have kept with them for so long would be heartbreaking and would change Hawaiian culture's relationship with nature as a whole.

The protection and the preservation of the honeycreepers are also vital in ensuring the spread of and growth of Hawai'i's native plants. Honeycreeper's seed dispersal and pollination ensures the native plant has a stable population. Honeycreepers also keep the bug population down even though they don't control the mosquito population enough to survive their disease dispersal. The honeycreepers are a very important species and no other species on the island can replace its job in the ecosystem. Species from the mainland might have been able to replace the honeycreepers, but introducing more invasive species to Hawai'i could just create even more problems and complications on the island.

Already, more than 33 species of honeycreepers have gone extinct with only a few species having less than 200. These honeycreepers have been going extinct because of multiple reasons such as habitat loss, climate change, increasing the mosquito elevation line, and introduced predators, but still have their biggest threat: Avian malaria. Avian malaria is a mosquito-carried disease caused by Plasmodium that can cause these birds to die from just one bite. We need to stop these types of problems from occurring by either figuring a way to decrease the mosquito population, or creating some sort of vaccine to make it so they are able to or are at least more likely in fighting off the virus that was brought upon them.

Honeycreepers clearly have a cultural and ecological importance and there are also many other reasons why they should be preserved and looked over. Honeycreepers also have thousands of people if not more that care about their population. As a teenager, I know you probably think I am too young and might not know enough on this topic, but I at least realize how big of a problem this actually is. The choices you make now could have a huge effect on the future of Hawai'i and will turn out positive or negative depending on if you make the right choice. So please, make the right decision so you don't regret it later and help me in supporting these elegant and essential creatures.

Mahalo,

Jules, 15 'Iolani School Honolulu, HI

# SAVE THE HONEYCREEPER

Aleana - Freshman at 'Iolani School



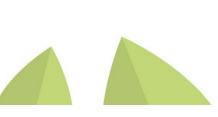
The native manu of
Hawaii have a cultural
significance to the
Kanaka Maoli as they
were a vital part of
ancient life.



"Every year, the honeycreeper species suffers from a significant population decline. This is due to the severity of many threats being posed toward them. As they are at risk of becoming extinct, it is very necessary that we take action to save them from being gone forever."















# SAVE THE HAWAIIAN HONEYCREEPERS





 Honeycreepers are endemic to the Hawaiian Islands. Over 30 species have already gone extinct! We MUST protect these honeycreepers for our future generations.

https://picryl.com/media/akiaplaau-hemignathus-monroi-or-hawaiian-honeycreeper-hawaii-volcanoes-national-307c32

 Non-native species, habitat loss, and introduced diseases are the biggest threats to honeycreepers. If we do nothing to control these invasive species, the honeycreepers will go completely extinct!



https://garystockbridge617.getarchive.net/amp/media/protect-against-mosquito-borne-diseases-7af7c2



https://www.flickr.com/photos/wallyg/4827161644

 Feathers of the honeycreepers were used as a symbol of power in ancient Hawai'i. and certain chants were created based off of the birds. If they go extinct. Hawai'i will lose a crucial part of their culture and history.



The many beloved and unique honeycreeper species of Hawai'i are on the brink of extinction with only 17 of more than 50 honeycreeper species left on Hawai'i. Of those 17, 12 are critically endangered or threatened.

Save the special Hawaiian birds who help to pollinate our native plants and maintain pest control in Hawai'i that'll balance our ecosystem . . .

Help the people of Hawai'i preserve their culture and land through saving our endemic and spiritual honeycreepers.

Fiona - 'Iolani Schoon



https://snl.no/orienteparula

# PROTECT THE HAWAII HONEYCREEPERS

95 out of 142
endemic manu
species are
extinct while
remaining 47 are
in critical
condition

KERYS- FRESHMAN AT 'IOLANI SCHOOL





Endangered by invasive species-rats, cats, mongoose, avian malaria

Don't you want the future generations to see these beautiful birds?

If nothing is done to stop the mosquitos population from expanding, the honeycreepers will go extinct in ten years!

Manu's
are
endemic
to Hawaii
and are a
keystone
species



# A LIFE WITHOUT HONEY CREEPERS

Honeycreepers are one of many native species going extinct in Hawaii. Some of the causes of this is, an avian disease called Plasmodium relictum which is spreaded by mosquitos. Honeycreepers also suffer from the lack of food and habitat due to rapid 'ohi'a death.



Honeycreepers are extremely important to
Hawaiian culture and if they go extinct, so does
a part of Hawaiian history and culture.
Hawaiian traditions are slowly disappearing
and if key aspects like honeycreepers vanish it
will be gone forever, and these consequences
cannot be fixed.



# Listen to these recorded testimonies from our Haumana.





Joey and Noa





Griffin and Jacob

Submitted on: 3/24/2023 6:39:05 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Testify
Candice Sakuda	Individual	Support	Written Testimony Only

Comments:

Aloha kākou,

I fully support SCR114, as it would help raise awareness and foster appreciation for our native honeycreepers. We have a responsibility to act now, to protect these culturally important, critical members of our ecosystems as they face human-induced threats. SCR114 is an avenue to inspire action.

Mahalo for your consideration,

C. Sakuda

Submitted on: 3/27/2023 12:47:39 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Lorraine Waianuhea	Individual	Support	Written Testimony Only

### Comments:

Aloha kākou,

I strongly support SCR114 which would establish August 8th as a day to celebrate Hawaiian honeycreepers. Establishing an official day to celebrate honeycreepers would help honor these birds that are extremely important to Hawaiian culture and the ecology of Hawai'i, as well as bring about greater awareness of honeycreepers and honeycreeper conservation within Hawai'i's communities.

Mahalo nui for the opportunity to provide testimony,

Lorraine Waianuhea

Submitted on: 3/27/2023 12:59:54 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Testify
Jon Ching	Individual	Support	Written Testimony Only

Comments:

Aloha,

I am writing in support of declaring August 08 HAWAIIAN HONEYCREEPERS CELEBRATION DAY. Hawai'i is the bird extinction epicenter of the world with 4 endemic Hawaiian honeycreepers projected to go extinct in the next decade. Already over 75% of these birds have gone extinct; birds who have thrived on the islands for MILLIONS of years - a fact that alone should warrant a day of celebration. With so few left, a day to recognize these birds is so important. Raising public awareness is crucial to saving these birds and giving them a shot at not only continuing to survive, but hopefully one day thrive in our skies again.

Hawaiian Honeycreepers are our kupuna and the kino lau of the Hawaiian gods. Their cultural significance is unmatched and their legacy goes wing-in-hand with the legacy of Hawai'i. Passing this bill would restore their importance to our modern culture, minds and hearts, and not leave them in the past. It would restore our connection to them and the great importance they have on the aina. Many native plants rely on them to thrive and they are a critical part of the interconnected ecosystem of Hawai'i that is truly a treasure on this planet.

Please vote to officially declare 8/08 Hawaiian Honeycreeper Celebration Day!

Mahalo Nui.

Jon

Submitted on: 3/27/2023 1:56:29 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Testify
Jaime Lewis	Individual	Support	Written Testimony Only

# Comments:

The link provided is a folder of 15 student testimonies from Mountain View Elementary School's 4th Grade Honors Class

**Student Testimonies** 

Submitted on: 3/27/2023 2:57:33 PM

Testimony for TCA on 3/28/2023 3:00:00 PM

<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Testify
Savannah Jane Duncan	Individual	Support	Written Testimony Only

# Comments:

I support the resolution to recognize August 8, as Hawaiian Honeycreeper Celebration Day! The time is now to shine the bightest light we can on these birds--they need our support now more than ever!

Submitted on: 3/28/2023 11:27:07 AM

Testimony for TCA on 3/28/2023 3:00:00 PM



S	ubmitted By	Organization	Testifier Position	<b>Testify</b>
Ι	Drew Cohick	Testifying for Hawaii Technology Academy	Support	Written Testimony Only

Comments:

**The State Senate** 

**Committee on Transportation, and Culture and the Arts** 

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee

I, Drew Cohick, am a supporter of SCR 114 relating to the resolution to designate August 8th as Hawaiian Honeycreeper Day. Our native forests are under attack from various human and climate caused problems. Our native Ohi'a forests cannot regenerate nor thrive without these uniquely evolved species of forest birds. I implore all legislatures to consider this resolution to bring more attention and resources to help save our forest birds. With Avian malaria, deforestation, Rapid Ohi'a Death, invasive predators, and habitat loss, these small birds need all the attention and help that they can get.

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**Drew Cohick** 

Local science teacher



Submitted on: 3/28/2023 11:37:06 AM

Testimony for TCA on 3/28/2023 3:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Testify
Amelia Robbins	Testifying for Hawaii Technology Academy	Support	Written Testimony Only

Comments:

The State Senate

**Committee on Transportation, and Culture and the Arts** 

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

I, Amelia Robbins am in support of , which would designate August 8th as Hawaiian Honeycreeper day.

I have learned that the endemic Honeycreepers are facing extinction, with only 17 of the previously 50 species remaining. They are facing threats of habitat loss due to Rapid 'Ohi'a Death and deforestation, invasive predators, and mosquitos carrying avian malaria, which is forcing honeycreepers farther and farther up into the mountains. The Honeycreepers main food source is the 'Ohi'a Lehua nectar, and the birds play a huge role in pollinating these trees. The 'Ohi'a are vital to draw in and filter rainwater, but can't survive without the Honeycreepers.

Sincerely,

**Amelia Robbins** 

HTA, 7th grade

Submitted on: 3/28/2023 11:45:26 AM

Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	Testifier Position	Testify
Moses Adams	Testifying for HTA school	Support	Written Testimony Only

Comments:

The House of Representatives

Committee on Culture, Arts, and international affairs

March 30th, 2023

9:30am, Conference room 224

**State Capital** 

**Testimony in support of HCR 81** 

Aloha Chair Tam, Vice Chair Martinez, and Members of the Committee,

I moses adams am a supporter of HCR 81 relating to the State Endemic Tree and wildlife endangered species which is the 'Ohi'a Lehua tree and honeycreeper species. The 'Ohi'a Lehua' tree is important to us for two main reasons. It is a main water replenisher for our state aquifers. Without This tree, no one would be able to live on the Hawaiian islands anymore. We also need the 'Ohi'a Lehua tree for the honeycreepers. The Honey Creepers once used to have 50 species now only 17 remain. Without the 'Ohi'a tree many honeycreepers species could possibly disappear which is why I think we should make a Hawaiian honeycreeper day on august 8th. Not only does this day raise awareness for honeycreepers but also for the 'Ohi'a Lehua tree which is both important to people in hawaii.

Sincerely,

moses adams

HTA 7th Grade.
The State Senate
Committee on Transportation, and Culture and the Arts
March 28th, 2023
3:00, Conference room 224
State Capital
Testimony in support of SCR 114

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

I <u>moses adams</u> am a supporter of SCR 114 relating to the State Endemic Tree and wildlife endangered species which is the 'Ohi'a Lehua tree and honeycreeper species. The 'Ohi'a Lehua' tree is important to us for two main reasons. It is a main water replenisher for our state aquifers. Without This tree, no one would be able to live on the Hawaiian islands anymore. We also need the 'Ohi'a Lehua tree for the honeycreepers. The Honey Creepers

once used to have 50 species now only 17 remain. Without the 'Ohi'a tree many honeycreepers species could possibly disappear which is why I think we should make a Hawaiian honeycreeper day on august 8th. Not only does this day raise awareness for honeycreepers but also for the 'Ohi'a Lehua tree which is both important to people in hawaii.

Sincerely,

moses adams

Submitted on: 3/28/2023 11:42:14 AM

Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
Josiah Martin	Testifying for H.T.A	Support	Written Testimony Only

Comments:

The State Senate

Committee on Transportation, and Culture and the Arts

March 28th, 2023

3:00, Conference room 224

State Capital

Testimony in support of SCR 114

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee, I, Josiah Martin am in support of SCR 114, relating to Hawaiian Honeycreeper day which would make august 8th Hawaiian Honeycreeper day.

I have recently learned that of the more than 50 species of honeycreepers endemic to Hawai'i, only 17 species remain and 12 of those are designated as critically endangered because of the loss of their feeding and nesting habitat, which is being destroyed by invasive plants, insects, and diseases such as Rapid 'Ōhi'a Death. The Hawaiian Honeycreepers are also dying because they're being killed by invasive rats, cats, and mongoose, and deadly diseases spread by mosquitoes, particularly avian malaria. One bite from a mosquito carrying avian malaria can result in death and it is estimated that many Hawaiian honeycreepers will go extinct within the next 10 years if mosquito populations are not controlled, predators are not managed better, and ongoing conservation efforts are not continued. Hawaiian Honeycreepers are also very important to Hawaii's ecosystems and culture. I hope you will consider making august 8th Hawaiian Honeycreeper day to try to help spread awareness for Hawaiian Honeycreepers.

Sincerely,

Josiah Martin

Submitted on: 3/28/2023 11:38:22 AM

Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
Noah	Testifying for HTA	Support	Written Testimony Only

Comments:

**The State Senate** 

Committee on Transportation, and Culture and the Arts

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

Noah Disilvestri is in support of SCR 114. HCR 114 would make august 8th Hawaiian honeycreeper day.

The purpose of bill HCR 114 is to spread awareness about Hawaiin honeycreepers.

I recently learned that honeycreepers were endangered in Hawaii and that there were essential for Hawaiian culture.

This decision impacts the community since honeycreepers are a native species and everyone would be glad it is back, Therefore, I urge the committee to support HCR 114.

Thank you for listening.

Submitted on: 3/28/2023 11:47:37 AM Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
malakai demetrio tapia	Testifying for HTA	Support	Written Testimony Only

Comments:

**The State Senate** 

Committee on Transportation, and Culture and the Arts

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Comttie,

I think that the hawaiian honeycreeper should be preserved because there used to be a time where the honeycreeper was see a lot but now you would be one of the luckiest people in hawaii to see one and that is why i think that they deserve a day to remind people that they are still here and still hanging on.

Malakai tapia

Submitted on: 3/28/2023 12:09:46 PM Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
Anuhea Jaramillo	Testifying for HTA	Support	Written Testimony Only

Comments:

The State Senate

**Committee on Transportation, and Culture and the Arts** 

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

I, Anuhea Jaramillo, am in support of SCR 114, relating to making August 8th as Hawaiian Honeycreeper Day! We should be more aware of how mosquitoes are killing Honeycreepers. HoneyCreepers are really important to our Hawaii Forest. They are really important. I think making August 8th Hawaiian HoneyCreeper day it's just to remind everyone that they're dying off from mosquitoes and that they should be remembered. Our forest will not be as healthy if we don't have HoneyCreepers pollinating and moving seeds around. Our forest would sound quiet and nobody would hear how beautiful the honeycreepers and all the other birds sound.

SIncerely,

Anuhea Jaramillo

**HTA** student

Submitted on: 3/28/2023 11:33:17 AM

Tastimory for TCA on 3/28/2023 3:00:00 B

Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
Stella Outzen	Individual	Support	Written Testimony Only

Comments:

**The State Senate** 

**Committee on Transportation, and Culture and the Arts** 

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

I, Stella Outzen, am in support of a State Honeycreeper day on August 8th. Honeycreepers have been going extinct over the years and I have realized how important they are to this ecosystem we live in. I feel it is important to raise awareness to the honeycreepers and to help protect them. They help keep the ohi'a healthy and without them, this ecosystem will collapse. These birds are just as important as the ohi'a here, and it would be devastating to lose them. Please consider this bill because Honeycreepers are a big part of what makes Hawai'i unique.

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Sincere	<b>I V</b> /
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Stella Outzen

7th Grade

Submitted on: 3/28/2023 11:33:41 AM Testimony for TCA on 3/28/2023 3:00:00 PM



<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Testify
Blake Becker	Individual	Support	Written Testimony Only

Comments:

The State Senate

Committee on Transportation, and Culture and the Arts

March 28th, 2023

3:00, Conference room 224

State Capital

Testimony in support of SCR 114

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

I, Blake Becker, am in support of the Hawaiian Honey creepers, which would protect them from harm, and make a Hawaiian Honeycreeper day.

Throughout this school year of 2022-2023 I learned that the native Hawaiian birds are very important to the ecosystem and Ohi'a which allows us to live here in Hawaii. The most common reason the birds are dying is because of the mosquitoes and the disease they carry called avian malaria. Without the birds the Ohi'a will die, and without Ohi'a Hawaii will not get enough water, because the watersheds would collapse. That would be bad for the animals, environment, and us in Hawaii, so please consider this bill. These birds deserve a holiday of their own because they are so important to Hawaii.

Sincerely, Blake Becker

grade 7

HTA (Hawaii Technology Academy)

Submitted on: 3/28/2023 11:34:15 AM Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
lola bresnahan	Individual	Support	Written Testimony Only

Comments:

Committee on Transportation, and Culture and the Arts

March 28th, 2023

3:00, Conference room 224

State Capital

Testimony in support of SCR 114/SR 107

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee, I lola bresnahan, am in favor of SCR 114/SR 107. I think this is important because our honeycreepers are dying out and I think the more we need to raise awareness. Making one day, honeycreeper day might even intrigue tourists not if they do not know about it and hopefully Intrigue the locals to learn more about Hawaiian Honeycreepers and rapidie ohia bath along with the mistos and rats that are killing them off. Did you know the 12 po'ouli this bill will help inform people about honeycreepers and the threats that they face? We ask for your help passing this Bill.

Mahalo for your time,

Lola

Submitted on: 3/28/2023 11:36:06 AM Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
Ashlyn Greer	Individual	Support	Written Testimony Only

Comments:

**The State Senate** 

Committee on Transportation, and Culture and the Arts

March 28th, 2023

3:00, Conference room 224

**State Capital** 

**Testimony in support of SCR 114** 

Aloha Chair Lee, Vice Chair Inouye, and Members of the Committee,

We should make August 8 Hawai'i Honeycreepers Celebration day because there might be people that don't know about Hawai'i Honeycreepers. Hawai'i Honeycreepers is a birds that all function as pollinators, nutrient cyclers, seed dispersers, and pest managers, keeping the forests of Hawai'i healthy is without the forests of Hawai'i will not be clean.

Submitted on: 3/28/2023 11:38:30 AM Testimony for TCA on 3/28/2023 3:00:00 PM



 Submitted By	Organization	<b>Testifier Position</b>	Testify
Arii hauata	Individual	Support	Written Testimony Only

#### Comments:

Iiwi are highly susceptible to introduced avian malaria, which is transmitted by a tropical mosquito that only occurs at low to mid-elevations of Hawaii. Iiwi breed only in high-elevation forests where the temperatures are too cool for the mosquito to occur, but their flights to find flowering trees can take them to where diseases occur. To help that we need to make a honeycreeper day.

Submitted on: 3/28/2023 11:46:53 AM

Testimony for TCA on 3/28/2023 3:00:00 PM



Submitted By	Organization	<b>Testifier Position</b>	Testify
Taedence (titi) sugimura	Individual	Support	Written Testimony Only

Comments:

The house of representativese

Committee on water and land

Mar 24,2023

State capitol

aloha chair Tarmas, vice chair Pihana Branco, and members of the committee,

I titi sugimura am a supporter of SB98 SD2 and HB 123. I am helping get a honeycreeper day on august 8th. I think we should get a honeycreeper day because we could learn more about them and we could try and help get more honeycreepers on kauai. There is only a little honeycreepers left.