



LATE

University of Hawaii at Manoa
Department of Microbiology

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Written Testimony: In support of the Bill HB 2079, proclaiming *Nesiotobacter exalbescens* be designated the State Microbe

I am a microbiologist with 28 years of experience in Microbial Diversity, genomes and bioinformatics. I have two doctoral degrees (Moscow State University, Russia and Max-Planck-Institute of Biochemistry, Germany). During the last 15 years I have been deeply involved in microbiology-related research centers around the world, e.g., New Zealand, Malaysia, Bangladesh and South Africa.

I have worked at the University of Hawaii at Manoa for 20 years. Microbes are critically important in the production of foods, fuels, industrial materials, and the air we breathe. Human biology can no longer concern itself only with human cells: Microbes at different body sites show profound differences and show how microbes contribute to tissue and organ function. Plant and microbes are bonded forever helping each other with nutrients and defense.

Our Hawaiian Archipelago is one of the most diverse ecosystems of our planet earth. It has more diversity than Galapagos Island (Darwin wrote his famous book Origin of Species based on Galapagos Island). Just think a minute, what would have written by Darwin, if he would have visited our diverse and beautiful Hawaiian islands.

I want our local school to graduate students to explore, and to make ground-breaking discoveries of our vast microbial diversity here in our islands. We can do that in many ways, but start early just by introducing something as simple (yet significant) as a state microbe. Children hear about whales and insects in school, and NOW our local kids to grandparents to can be proud that wonder microbe *Nesiotobacter exalbescens* is designated state microbe, is very rare. It is an excellent example of what novelty among Hawaiian life means to many people, from students to seasoned researchers.

I urge you to support the Bill 2079, proclaiming *Nesiotobacter exalbescens* be designated the State Microbe.

Sincerely,

Maqsudul Alam
Professor and Chair
Department of Microbiology
University of Hawaii

morikawa2 - Grant

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 23, 2012 8:54 PM
To: HLTtestimony
Cc: paulbump@hawaii.edu
Subject: Testimony for HB2079 on 2/24/2012 11:00:00 AM

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Testimony for HLT 2/24/2012 11:00:00 AM HB2079

Conference room: 329
Testifier position: Support
Testifier will be present: No
Submitted by: Paul Bump
Organization: Individual
E-mail: paulbump@hawaii.edu
Submitted on: 2/23/2012

Comments:

Hawaii clearly needs a state microbe! As an undergraduate working at the Center for Microbial Oceanography I have been fortunate to be able to dive into this exciting and extremely important field. Mahalos for your consideration. -Paul

February 23, 2012

Rep. James Tokioka
Rep. Ryan Yamane
Rep. Dee Morikawa

L A T E

Subject: HBZO79

Dear Committee:

I am writing to you to support the passage of HB2079 to designate *Nesiotobacter exalbescens* as the official state microbe for Hawai'i. I am a Ph.D. Student in microbiology at the University of Hawai'i at Mānoa and I have worked with various environmental samples from diverse habitats such as volcanic crater lake (Kauhako) on Molokai, deep-sea hydrothermal water from Lō'ihi submarine volcano, and microbial communities in Kīlauea caldera in Hawai'i. I am currently studying an ancient cyanobacterium isolated from a cave entrance in Kīlauea caldera.

I support this bill because of the uniqueness and rarity of the microbe proposed. The bacterium was first detected in Hawai'i and even after 12 years, just one close relative of this bacterium has been reported, and again only once. The remote and pristine location of the bacterium's habitat (Laysan Atoll in the Northwestern Hawaiian Islands) is also an important factor to consider for the proposed state microbe.

I think an official state microbe for Hawai'i will be crucial to educating the general public about endemic wild life in Hawai'i. By having an official state microbe, kids in Hawai'i will one day be inspired to learn about how microbes play their roles in the natural world and more importantly, learn to protect and preserve the precious and endemic flora and fauna that is unique to Hawai'i.

Sincerely,

Jimmy Saw
Ph. D. candidate
Department of Microbiology
University of Hawai'i at Mānoa

morikawa2 - Grant

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 23, 2012 7:30 PM
To: HLTtestimony
Cc: Brenda.Kosky@gmail.com
Subject: Testimony for HB2079 on 2/24/2012 11:00:00 AM

LATE

Testimony for HLT 2/24/2012 11:00:00 AM HB2079

Conference room: 329
Testifier position: Support
Testifier will be present: No
Submitted by: Brenda Kosky
Organization: Individual
E-mail: Brenda.Kosky@gmail.com
Submitted on: 2/23/2012

Comments:

L A T E

I am a microbiologist with a master's degrees (MS) degree from UH Manoa, and I am writing in support of HB 2079.

I believe many people think microbes only do bad things, such as cause diseases or pollute our beaches after a heavy rain. That might be encouraged from an early age, but without microbes we really would suffer, because they are important in the production of foods, fuels, industrial materials, and the air we breathe.

I would like to see a greater focus in schools on children seeing the versatility and wonder of microbes. I worked for several years as a "Mad Scientist" with Mad Science of Hawaii, and could easily tell the difference between those in public & private schools. The private school children were always much more interested science than the public school children, who surprisingly, knew very few science concepts. I think we need to push a stronger science curriculum on our youth, and help them get interested in science any way we can.

A great start would be by just by introducing something as simple (yet significant) as a state microbe. Children hear about whales and insects in school, but we should challenge the negative perceptions they have of microbes, or at least teach them why some are so dangerous. They might just be impressed enough to study microbes as they go through school. Some high schools do have facilities for microbiology, but most children settle on other career options before they really discover microbes. There are many interesting things that apply to our daily lives that microbes do-did you know our bodies require 'healthy bacteria' to help us digest our food, or that many of our antibiotics are produced by microbes? There is a plethora of information out there for our keiki to learn about when it comes to microbes.

I appreciate that the candidate for state microbe, *Nesiotobacter exalbescens*, is very rare. That in itself supports what our teachers focus on, that Hawaii hosts many unique plants and animals. However, this is a bacterium. It is an excellent example of what novelty among Hawaiian life means to many people, from students to seasoned researchers.

I urge you to support the proposal HB 2079 that *Nesiotobacter exalbescens* be designated the State Microbe.

Sincerely,

Leena Couling