
HOUSE CONCURRENT RESOLUTION

URGING THE DEPARTMENT OF AGRICULTURE, DEPARTMENT OF HEALTH,
DEPARTMENT OF LAND AND NATURAL RESOURCES, AND UNIVERSITY OF
HAWAII TO DEVELOP AND IMPLEMENT A MOSQUITO CONTROL PROGRAM
THAT USES *WOLBACHIA* BACTERIA TO REDUCE MOSQUITO POPULATION
LEVELS THROUGHOUT THE STATE.

1 WHEREAS, the control of non-native mosquito populations
2 throughout the State is urgently necessary to protect the health
3 and well-being of the State's residents and wildlife; and
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5 WHEREAS, mosquito-borne diseases, including the Zika virus,
6 West Nile virus, Chikungunya virus, dengue, and avian malaria,
7 are spread through the bite of an infected mosquito; and
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9 WHEREAS, more species of native birds have gone extinct in
10 Hawaii than anywhere else in the world, with nine unique bird
11 species disappearing from Hawaii since the 1980s; and
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13 WHEREAS, virtually every individual native forest bird or
14 passerine living below 4,000 feet, or 1,200 meters, in elevation
15 has been eliminated by avian malaria; and
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17 WHEREAS, between 2013 and November 2, 2020, the Department
18 of Health confirmed twenty-six cases of the Zika virus, thirty-
19 six cases of the Chikungunya virus, and three hundred sixty
20 cases of dengue in the State; and
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22 WHEREAS, according to a Department of Agriculture report
23 submitted to the Legislature on December 26, 2019, as required
24 by Act 106, Session Laws of Hawaii 2019, mosquitoes in Hawaii
25 also pose a significant threat to Hawaii's native wildlife,
26 especially native birds; and



1 WHEREAS, Hawaii's mountaintop forests serve as a refuge for
2 native birds escaping from mosquitoes that carry avian malaria;
3 and
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5 WHEREAS, however, climate change has raised temperatures in
6 Hawaii's mountaintop forests, resulting in mosquitoes moving
7 toward the mountains' respective summits and threatening the
8 only disease-free refuge for native birds; and
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10 WHEREAS, the birds of the Hawaiian Islands are a unique
11 biological resource and a critical component of Hawaiian
12 culture, warranting conservation and protection; and
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14 WHEREAS, various federal and state agencies, including the
15 United States Fish and Wildlife Service, National Parks Service,
16 Department of Agriculture, Department of Land and Natural
17 Resources, Department of Health, and University of Hawaii have
18 made significant efforts to suppress mosquito populations; and
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20 WHEREAS, these efforts include the development of
21 *Wolbachia*-infected mosquito lineages, application of chemical
22 adulticides and larvicides, reduction of mosquito habitats, and
23 distribution of materials to educate the public about mosquito
24 control and bite prevention; and
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26 WHEREAS, *Wolbachia* is a naturally occurring bacteria that
27 is present in fifteen to seventy percent of all insects and is
28 already present in insect species statewide; and
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30 WHEREAS, introducing the *Wolbachia* bacteria, which is safe
31 to humans and the environment, into mosquito populations
32 throughout the State would help to reduce mosquito populations,
33 thereby lowering the rate of mosquito-borne diseases in humans
34 and wildlife; and
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36 WHEREAS, because male mosquitoes infected with certain
37 *Wolbachia* bacteria are unable to produce offspring with wild
38 female mosquitoes that are either not infected with any
39 *Wolbachia* bacteria or are infected with a different *Wolbachia*
40 bacteria than the male mosquito, *Wolbachia* bacteria may also be
41 used to suppress mosquito populations; now, therefore,



1 BE IT RESOLVED by the House of Representatives of the
2 Thirty-first Legislature of the State of Hawaii, Regular Session
3 of 2021, the Senate concurring, that the Department of
4 Agriculture, Department of Health, Department of Land and
5 Natural Resources, and University of Hawaii are urged to develop
6 and implement a mosquito control program that uses *Wolbachia*
7 bacteria to reduce mosquito population levels throughout the
8 State; and
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10 BE IT FURTHER RESOLVED that certified copies of this
11 Concurrent Resolution be transmitted to the Chairperson of the
12 Board of Agriculture, Director of Health, Chairperson of the
13 Board of Land and Natural Resources, and President of the
14 University of Hawaii System.

