DON'T IRRADIATE THE BIRDS!

In mid-October 2019, the Maui Forest Bird Recovery Project (MFBRP), in cooperation with the U.S. Fish and Wildlife Service, the State of Hawai'i, The Nature Conservancy, the American Bird Conservancy, Pacific Bird Conservation, and San Diego Zoo Global, attached VHF radio transmitters to a harness on the legs of 10 kiwikiu before releasing them into the Nakula Natural Area Reserve, on the southern slope of Haleakalā volcano. Kiwikiu, a species of honeycreepers found only on Maui, are critically endangered. They are small, weighing less than an ounce. Fewer than 150 of these intelligent, long-lived little birds remain.

The birds -- some captive-raised and some wild -- were released into the forest between October 27 and October 30, 2019. By November 16, every bird was dead *except* the three who had succeeded in removing or disabling their transmitter. The details are shocking.

Seven wild kiwikiu were captured from the Hanawī Natural Area Reserve and transported to aviaries in the Nakula reserve on the morning of October 17 in

preparation for release in the proposed new bird sanctuary. One of the birds, number WILD9, received his transmitter on October 29. He had been strong and healthy prior to that moment, but as soon as it was attached, he hopped onto the ground and stayed still on the floor. Half an hour later, he tucked his head under his wing. Bird Recovery staff then removed the transmitter, but he did not recover. He continued to sit quietly on his perch, and was found dead the next morning.

Another wild bird, number WILD10, received her transmitter on October 26. She attacked the harness holding it onto her ferociously, bit it apart, and removed it. It was found on the ground on October 28. Later on October 28, the Bird Recovery team put a new transmitter on her. On October 29, she was lethargic and not eating. On October 30, she was "fluffed and inactive." She was found dead on the morning of October 31.

The other five wild-captured kiwikiu were released into the Nakula reserve with their transmitters intact. WILD5 died on November 11. WILD8 died on November 5. WILD11 died on November 16. WILD7 removed his transmitter on November 8, and he was last observed, doing well, on November 12. WILD1 succeeded in disabling his transmitter the day after his release, and he was observed, doing well, with the harness still attached to his legs, on November 24. He eventually removed the harness as well and was observed again, doing well, on July 23, 2021, ***632 days after his release into the forest***.

Five captive-bred kiwikiu were also part of the project. They had all been raised in bird conservation breeding centers on Maui and Hawai'i, and were between 5 and 18 years old. Two of these birds died during the two-week preparation for release, although they had thrived for years in the bird conservation centers. Bird number MP022 received his transmitter on October 29. Like WILD9, he hopped onto the ground and stayed on the floor after his transmitter was attached, but unlike WILD9 he rolled onto his side and kept on attacking the transmitter with his beak until finally he got his mandible stuck in the harness. Staff removed the transmitter and released him into the Nakula reserve without it, but he did not recover and died on November 2. Bird number MP026 was released with his transmitter on October 29 and died on November 5. Bird number MP023 was released with his transmitter on October 28, and succeeded in removing his transmitter the following day after being observed "moving on a direct path out of Nakula NAR." Presumably he flew as far away from his captors as he could. Bird number MP027 also survived because he was not released with a transmitter. This bird had had a transmitter attached in a previous trial on April 8, and immediately lay on his back on the floor of his cage and

did not move. Seeing this, staff removed his transmitter after only a few minutes. On October 23 they attached a transmitter to him again briefly but decided not to include him in the experiment and returned him to the Maui conservation center where he was still alive and well as of the date of publication of the MFBRP report on March 15, 2021.

The writers of the report attributed every kiwikiu death to malaria, despite the facts, stated in the report, that malaria had never before been found in birds in the conservation breeding centers or the Hanawī reserve where all the birds came from; that malaria had never been known to infect more than about 10 or 15 percent of any population of honeycreepers; that malaria does not kill all birds it infects and honeycreepers are known to develop resistance to it; that other parasites were also found in the birds; and that the average time from first symptoms to death for the birds in this project was "1-2 days" which is not typical of malaria. Two "large, healthy male kiwikiu" died within hours of their first signs of reduced activity. The authors of the study wrote:

"[I]t was not clear if these birds could have contracted the disease in Nakula NAR as these birds developed symptoms more rapidly than is typical and died more rapidly than has been reported for other honeycreepers."

They went on to speculate:

"The necropsies found parasites in multiple organ systems indicating a severe systemic infection that had moved out of the blood stream into other tissues. This could be the result of increased replication of the malaria parasite following some change in the immune system of the birds, such as in response to environmental stress."

The environmental stress that they did *not* consider was the radiation from the VHF transmitters that they attached to the birds. Even after discovering that the bird who disabled his transmitter less than one day after his release was thriving almost two years later, the researchers remain wedded to their malaria theory. As reported in the *Honolulu Star Advertiser* on July 23, 2021, "officials said the discovery is unlikely to change the current plan to save the bird, which includes capturing up to 30 kiwikiu and shipping them to zoo facilities in Pennsylvania, West Virginia and Utah while officials figure out how to control the disease-carrying mosquitoes in the wild."

A correspondent in Alberta wrote to me last year:

"Prior to me being aware of the dangers I had a tracking collar for my beagle as he was a little bit of an escape artist. Unfortunately after having worn it for a while (3 months or so) with it on only while he was outside he started to develop joint pains and was not walking right. The vet said he had a common beagle issue of his spine starting to compress and cause problems. Right around the same time I was learning of the dangers of all these wireless devices and got rid of his tracker. He was off pain killers and back to normal in under a month and the issue has never returned."

Nor did the Bird Recovery team consider the radiation from the giant antenna farm towering over the Nakula Natural Area Reserve atop Puʻu ʻUlaʻula (Red Hill). There are 159 antennas on 20 telecommunication towers on top of that hill blasting the Nakula reserve with cell phone, internet, radio, television, government, police, military and other signals. The Air Force Maui Optical and Supercomputing (AMOS) facility is there. The authors of the Bird Recovery report wondered why it is that the wild kiwikiu choose to remain in the small 7,413-acre Hanawī Natural Area Reserve on the windward slope of the volcano and do not stray over the top to the leeward slope where they would be more sheltered from the elements. It is because in the Hanawī reserve the crest of the volcano above them blocks all the radiation from that antenna farm and cell phones do not even work where they live.

Since the failure of the relocation project, efforts to save the kiwikiu from extinction have focused on releasing billions of bacteria-infected mosquitoes onto Maui in a misguided attempt to save the birds by eradicating avian malaria from the island. As of this writing, a lawsuit against the mosquito project, filed by Hawai'i Unites, is being heard by Hawai'i's Environmental Court. Not only will importing billions of mosquitoes, however altered, into the national park and nature reserves of eastern Maui only make the situation worse for the birds; not only could it backfire and further spread malaria instead of eradicating it; but *no* solution is possible for this or any other species of rare bird as long as we as a society continue in our denial about the radiation disaster that we are inflicting on our planet from every direction.

In 2017, Mark Broomhall wrote a 38-page Report for the United Nations Educational Scientific and Cultural Organization that shines a bright light on why the kiwikiu have retreated to the high elevations of the northern slope of Haleakalā volcano in Maui, and what must be done to protect them. The following is from his summary of his years of observation of the birds and wildlife on Mount Nardi in the Nightcap National Park World Heritage Area in Australia. That mountain, on which he lived for 40 years, has telecommunication towers on its summit:

"It wasn't until the Analogue Era was drawing to a close, along with the advent of digital wireless technology in the years 2002 to 2004, that I began to notice a decline in insect diversity and population. This period was at the back-end of a prolonged nationwide drought and there was much talk of global warming.

"Initially, I attributed the insect decline to these events. I later learnt of 'mobile phone pulsed microwave technology' and understood from press reports that this was being installed on Mt. Nardi. This technology is named universally by the industry, the press, and the public at large, as '3G.' With this knowledge, I began to suspect that perhaps something else was happening on Mt. Nardi. At the same time, further additions included Wideband Code Division Multiple Access (WCDMA) technology.

"In the year 2009, enhanced 3G technology was installed and a further 150 pay television channels were added to the tower. Following these additions, I witnessed the exodus of 27 bird species from Mt. Nardi while simultaneously, insect volumes and species variety dropped dramatically.

"In late 2012 and early 2013, with the construction of a new tower in the complex and the introduction of a 600,000-watt generator, the system was upgraded to what became universally known as "4G." Immediately after, I witnessed the rapid exodus of a further 49 bird species. From this time, all locally known bat species became scarce, 4 common species of cicada almost disappeared, as well as the once enormous, varied population of moths & butterfly species. Frogs and tadpole populations were drastically reduced; the massive volumes and diverse species of ant populations became uncommon to rare."

Broomhall's observations are consistent with thousands of published reports in the scientific literature, as well as a constant stream of informal reports from my colleagues and subscribers that I have been receiving from all over the world for decades -- from Spain, from Japan, from Norway, from the Netherlands, from Greece, from everywhere.

The essential difference between Mount Nardi and the kiwikiu's current refuge is that an antenna farm irradiates all of Mount Nardi whereas cell phones do not even work in the Hanawī reserve. It is why the kiwikiu have retreated there. If the birds are simply left alone and *not* given radio transmitters, and if antennas for telecommunications, radar, WiFi, and any other purpose are prohibited on the volcano and in the nature reserves around it, as well as above it from drones as has

been experimented with elsewhere in Hawai'i, the birds will thrive. If not, they will perish.

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