HYBRIDIZATION
of the Koloa Maoli

Q: Why is the Mallard duck a problem for the Koloa Maoli?

A: The Mallard duck is a broadly distributed species, first introduced to Hawai'i from North America in the late 1800's for farming, sport hunting and pond beautification. They subsequently moved into the wild and became 'feral'. These feral birds soon came into contact with the native Hawaiian duck, or Koloa Maoli, and interbred with them to produce fertile hybrid offspring. Non-hybrid Koloa Maoli have dwindled to the point now that there are probably less than 2000 remaining in the wild. The threat of extinction is very real unless the issue of hybridization is tackled.

Q: If Mallards and Koloa Maoli interbreed, are they really separate species?

A: Evolutionary ornithologists (bird biologists) have concluded that Koloa Maoli are a genetically distinct species and have existed on Hawaii for around 100,000 years. As such, we have a clear duty to ensure that Koloa Maoli are protected from interbreeding with introduced Mallards.

Q: Won't the Koloa Maoli's genes be retained in the hybrids?

A: It is useful to look at what has happened in New Zealand where Mallards were introduced over 100 years ago. Gradually they dispersed and began to breed with indigenous Grey Ducks, producing fertile hybrids. There are now thought to be so few pure Grey Ducks remaining that they are now officially recognised as "Nationally Critical" by the New Zealand government.

If the situation here evolves as in New Zealand, then we can predict that Mallards and hybrids will become more numerous and the genes of the Koloa Maoli will become so diluted that they will be untraceable.

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Q: Why should we care if the Koloa Maoli becomes hybridized or extinct?

A: We are seeking to redress what we now know to be an environmentally damaging interference by human kind, namely the release of a domesticated species (the Mallard) in an environment where it did not occur naturally. The result of that activity is the threatened extinction of a Hawaiian native species (the Koloa Maoli). It is the responsibility of this generation to protect biodiversity and ensure a healthy environment for future generations.

Q: Aren't wild Mallards native to Hawaii?

A: Yes. Every Winter, small numbers of wild Mallards migrate through the Hawaiian Islands. These are not in breeding condition and are not part of the hybridization issue. Migratory birds are protected by international law.

Q: Is there any hope for the Koloa Maoli?

A: Yes! Recent genetic evidence collected from ducks on Kauai show that there is a *very low* rate of hybridization amongst the Koloa Maoli there. This result is a credit to the efforts of the people of Kauai. Although each Hawaiian island has its own unique issues, this proves that the hybridization threat can be successfully tackled.

Q: What is being done to protect the future of the Koloa Maoli?

A: Research is being conducted into the degree of hybridization amongst different populations of ducks throughout the Hawaiian Islands. These data will help inform potential future management actions, such as re-introductions, re-starting captive breeding efforts, and control of Mallards. The restoration of wetland habitat is of critical importance to the recovery of Koloa Maoli and many other native Hawaiian plants and animals, as is the continued management of existing wetlands.

Please share your knowledge and help protect the Koloa Maoli.

For more information, references, and contact details please visit *http://dlnr.hawaii.gov/wildlife/koloa*

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