

Success of captive-rearing for a threatened shorebird

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Captive breeding, rearing and reintroduction programs have been used extensively to support conservation efforts for a wide array of threatened species but they require extensive financial resources and are prone to failure for a variety of reasons. It is essential to determine the effectiveness of these programs if limited resources are to be spent on them for the recovery of rare species. In Monterey Bay, California, a small number of Snowy Plover eggs and chicks abandoned by their parents are reared by the Monterey Bay Aquarium each year to support conservation efforts for this federally threatened species. After release back into the wild, we studied these captive-reared plovers as part of our annual efforts to track the long-term status of the Monterey Bay snowy plover population.

We examined how well they survived and reproduced compared to wild-reared plovers that were exactly matched by age and sex. We found no differences in survival or reproductive output between captive and wild plovers.

We attribute the success of captive-reared plovers in the wild to multiple factors. There was minimal evidence of behavioral deficits, such as habituation to humans or failure to select

appropriate habitat, resulting from the captive environment which can be a common stumbling block for captive-rearing programs. There was a large existing wild plover population at the Monterey Bay release site, which may have encouraged newly released plovers to remain in the area during winter and to join the breeding population, thereby avoiding the risks of moving to another site. There may have been social benefits gained from joining a large group, as it is probably easier to learn crucial skills of predator avoidance. In addition, the habitat quality at the release site was high due to historic and ongoing efforts to manage beaches for this imperiled plover. Our findings demonstrate that captive-rearing is a valuable tool to support ongoing Snowy Plover conservation efforts.

due to multiple factors including the rearing environment, the large number of wild Snowy Plovers and the habitat quality at the release site.

We believe that captive-rearing is an effective tool to support ongoing Snowy Plover conservation efforts, and may be relied upon in the event that nests need to be salvaged due to catastrophic events such as an oil spill.

Neuman, K.K., L.E Stenzel, J.C. Warriner, J. L. Erbes, C.R. Eyster, G.W. Page, E. Miller, and L.A. Henkel. 2013. Success of captive-rearing for a threatened shorebird. *Endangered Species Research* 22:85-94.

Main Points

Snowy Plovers that were reared in captivity and released back into the wild survived and reproduced at rates similar to their wild-reared counterparts.

The success of captive-reared plovers in the wild was probably

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