Orange-bellied Parrot (OBP) Recovery Program News, July 2023

Prepared by Toby Galligan, OBP Recovery Program Coordinator, on behalf of the OBP Recovery Team.

The OBP Recovery Team met online in April to review the implementation of the OBP recovery plan in the past year (May 2022-April 2023). Last news release (May 2023), I shared the results from Melaleuca (i.e., OBP returns, releases, and recruitment). Here, I will share some highlights from the captive breeding, insurance, and research programs.

Moonlit Sanctuary's Lisa Tuthill and Ashley Herrod*, who oversee our captive breeding program, managed another good year of breeding. Across the five institutions involved**, 134 young OBPs fledged; and 88% of fertile eggs produced fledglings, more than the six-year average (i.e., 82%).

The breeding program continues to produce juveniles for release without reducing the insurance population. We are reducing the size of the captive population through controlled breeding to allow us to produce more juveniles for release. There are always some juveniles that we cannot release (e.g. they did not pass health screening; see below); so, with a smaller captive population, we can increase breeding, knowing that we will be able to house a proportion of juveniles that cannot be released.

The captive breeding program faces the odd challenge. This past year, an infestation of mites, formerly unknown to affect OBPs, prevented a planned release near Western Port, Victoria. Vets and keepers successfully treated the affected OBPs, which have rejoined the captive population.

The program has achievements, too, like the wire-mesh nest-box doors used for the first time to reduce the incidences of mother-offspring feather-plucking. This detrimental behaviour is associated with females spending excess time in the nest-box during the nestling phase. Moonlit Sanctuary staff used the special door to allow light and airflow into the nesting chamber, which resulted in shorter female visits, the cessation of feather-plucking, and the regrowth of feathers on affected nestlings. This is a management hack that will benefit the entire program.

Last year, the Recovery Team was shocked to read that Queensland researchers have found psittacid herpesvirus (i.e., Pacheco's disease) in Australia for the first time***. While this serious disease is not an immediate threat to OBPs, we have added the virus to our health screening. Fortunately, we completed a Wildlife Disease Risk Assessment for OBPs led by Paul Eden from Zoos Victoria; and we are now using this tool to prevent diseases emerging and spreading within and between captive institutes, and into the wild population.

Australian National University's Dejan Stojanovic continued to enhance the recovery program with his research in the past year. Modelling biological and ecological data, he compared the benefits of our current interventions to save the OBP from extinction. He showed releases,

particularly those of juvenile OBPs, will make the wild population grow to a sustainable size. However, if these releases were to stop, the wild population would quickly go extinct. This is because overall juvenile mortality is too large (i.e., 60% in 2022). The causes, let alone the solutions, for high juvenile mortality have remained unknown…

…until now – Luara Bussolini, undertaking a PhD at ANU, has found one possible cause: lower body condition. She examined the effect of body condition (i.e., weight) on survival in wild and captive-released juvenile OBPs. She found those that who survived their first year in the wild were more likely to have higher body conditions than those that did not. Migration, like that of the OBP, is a highly taxing endeavour; therefore, it makes sense that individuals with higher body conditions – more fuel and more muscle – are better able to survive. With this knowledge, we can consider body condition when selecting juveniles for release; and we can aim to increase body condition in both wild and captive juveniles. I sense some more management hacks on the way.

Our OBP Winter Survey continues later this month (22-23 July) and in September (9-10). If you would like to join in by surveying a mainland site, go to the dedicated Birdlife Australia webpage (https://birdlife.org.au/events/orange-bellied-parrot-winter-surveys). If you would like to join in by surveying a Tasmanian site, go to the Wildcare Tasmania event calendar (https://wildcaretas.org.au/events). Otherwise, you can contact me thgalligan.obp@gmail.com

** Moonlit Sanctuary manages the OBP Species Management Program on behalf of the Zoos and Aquarium Association, and Lisa and Ash are employed by Moonlit Sanctuary to, amongst their other roles, act as the Species Co-ordinator and Studbook Keeper, respectively.*

*** Zoos SA's Adelaide Zoo, NRE Tas' Five Mile Beach, Zoos Victoria's Healesville Sanctuary, Moonlit Sanctuary, and Priam Psitticulture Centre.*

****Wildlife Health Australia Factsheet https://bit.ly/3MPVGkw*

Above image: A stunning male Orange-bellied Parrot at Melaleuca, Tasmania, photographed by Marianne Gee, 2022.

Fast Facts:

OBPs (*Neophema chrysogaster*) are small ground-feeding parrots. Males are bright green, yellow, and blue with a prominent orange belly. The colours of females and juveniles are subdued and they have less prominent orange bellies.

In the summer, OBPs breed in southwestern Tasmania within 5km of the coast. In autumn and spring, they migrate via western Tasmania, the Hunter Island Group, and King Island. OBPs winter in coastal habitats in southeastern Australia. Each year, OBPs migrate at least 600 km over land and sea.

The IUCN Red List and the Australian EPBC Act 1999 classify the OBP as Critically Endangered. The species persists as a tiny wild population, breeding at a single location, after a recent rapid decline.

There is some uncertainty about the cause of the species' decline. Habitat loss and degradation plus introduced predators and competitors likely drove past declines. Today, several interacting threats impact OBPs.

The Recovery Team comprises 28 government, non-government, and community groups. It develops, coordinates, and reviews the OBP Recovery Plan; and preserves expertise and advice in OBP biology, ecology, and conservation.

Volunteers contribute to the actions of the OBP Recovery Program. They assist by collecting data on OBPs in the field and captive institutions. They also raise public awareness and funds for recovery actions.

The organisations within the Recovery Team fund recovery actions. Government and non-government grants, and individual and corporate donations, provide extra financial support.