

# thylacinus



**Cover photo:** Orange-bellied Parrot male at Moonlit Sanctuary  
**Credit:** Ash Herrod

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## FROM THE PRESIDENT Chris Dryburgh

Hi Everyone, and a huge welcome to 2021!

2020. Wow!

A year that most of us are glad has drawn to an end. A year that most would prefer to forget. A year that rattled our industry and saw the very vast majority of animal care workers across Australasia take some real financial hits. Every Zoo and Aquarium across the Region went into lockdown, and it was felt by every team across every institution. The year also saw the Splendid Poison Frog (*Oophaga speciosa*) declared Extinct by the IUCN, across their known distribution in Panama, with the last recorded sighting in the wild back in 1992. It was announced that the Vaquita (*Phocoena sinus*), of the northernmost reaches of the Gulf of California, Mexico, is the rarest marine mammal in the world with less than 10 individuals, possibly already extinct. It goes without saying that 2020 was a year with more than its fair share of trials and challenges.

Promisingly though, while a pandemic shook the world's human population, and while threatening processes continued to advance around the world's wild animals and wild places, several success stories emerged out of 2020. The European Bison, (*Bison bonasus*), the largest terrestrial animal in Europe, is steadily recovering after only persisting exclusively in captive herds in the early twentieth century, now peaking beyond 6,200 individuals roaming wild throughout several European range states. The Turtle Survival Alliance reports that after the loss of the world's only known female Yangtze Giant Softshell Turtle (*Rafetus swinhoei*) in 2019, a newly-recovered wild individual has been confirmed as a female in December 2020. With the entire species represented by only three individuals, and as the most endangered species of turtle on earth, the TSA announces this as "the best news of the last decade for global turtle conservation".

Closer to home, and with the support of all of the ASZK's membership, we proudly responded to the 2020 Black Summer Australian Bushfires with a donation of AUD2,300 as relief funding for the recovery effort of the endemic and Critically Endangered Kangaroo Island Dunnart, *Sminthopsis aitkeni*, restricted to healthland of the western end of Kangaroo Island in South Australia – an area heavily ravaged by fire in December 2019 and early 2020. These funds went towards feral cat abatement, recovery of habitat, wider camera trap surveys, and protecting remnant populations post-fire. So while the wild rollercoaster hasn't stopped yet, clearly the conservation, education and recovery efforts of our Australasian Region's zoos, parks and aquaria continues, and it is, you, our resilient animal care professionals that are maintaining this dedication and compassion.

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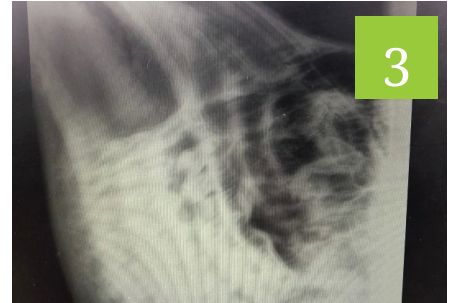
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## Dental X-Ray Training in Giraffe ... It takes a Zoo!

**GEORGIE GREIG, ZOOS VICTORIA**

During the past year, Melbourne Zoo Giraffe keepers have been working together to build on our Giraffe Training Program for a multitude of important behaviours, such as Chute training, Blood draws, Hand injections, Hoof care and Dental X-rays.

After a Quality of Life Assessment on ageing 23 year old female, Twiga, our vets expressed a strong desire to take dental radiographs, as we had noted some weight loss and a drop in body condition. These may be indicators of poor dental health, something that is fairly common in elderly Giraffe.

Historically, due to our facility set up, almost all of our Giraffe training has taken place in the chute with the front door open to allow for choice and control during their sessions. Conducting dental X-rays with this set-up would not be impossible, but would be tricky and potentially take a long time.

We put our brains together to think about a way to train this behaviour in the most positive, least intrusive way.

We decided to change the antecedent completely and train this from our behind-the-scenes encounter platform. This area already had a strong positive association for Twiga and it provided her with a choice to either approach us for a training session or move away easily at any time. This

control for her was a huge reinforcer and motivator. We also needed mock X-ray equipment. After discussions with our vets and our assets team, I drew up some measurements and an X-ray plate holder, complete with fake X-ray plate, and a stand that was purpose-built. We borrowed X-ray gowns for training and created a mock X-ray machine from a cardboard box and bright yellow tape, attempting to mimic the exact X-ray set-up that would eventually take place. We were ready to begin our training.

Initial steps required a desensitization program for the equipment, step by step, piece by piece, starting with the plate holder and stand.

After several training sessions desensitizing the X-ray stand equipment, we moved to our next approximation. This entailed cueing Twiga to target right next to the X-ray plate holder and building on duration. Once this approximation was complete, we added in a second keeper holding the X-ray box. By this approximation, each training session required a minimum of three keepers, two to work with Twiga and one to work with our other female giraffe, Nakuru. It was a great opportunity to work together as team to achieve the best healthcare possible for our Giraffe. After five weeks, we were ready to trial our first X-ray with vet staff!



*Twiga with X-ray plate holder and stand: Lots of investigating!*



*Dr Michael Lynch taking radiographs of Giraffe Twiga (pic taken pre-COVID-19 restrictions)*

From here, there were some learnings that were really helpful. We added in a chin rest to our antecedent arrangement to assist Twiga with more information for her head placement. This meant beginning with desensitization to the chin rest and then building in the other components of X-ray training again. It was step by step, always moving at her pace through each approximation. We also continued to work on building duration of her head nice and still next to the X-ray plate. We achieved a nice long duration with this behaviour by using the ‘rubber band’ technique to ensure we were always keeping our level of reinforcement high and maintaining a positive training session and engagement from Twiga. Two months later, we undertook another X-ray with our vet staff.



*Twiga investigating her new chin rest Image six: Keepers Arthur Blackham and Georgie Greig training Twiga for dental X-rays. (pic taken pre-COVID-19 restrictions)*



We continued to maintain this behaviour and undertake mock X-ray and real X-ray sessions with both our team members and members of our vet team. Dental specialist Paul joined us, two weeks after our previous X-ray had taken place, and we were able to achieve our goal to accurately understand Twiga's dental health using his highly specialised equipment.

Sadly, these images allowed us to diagnose that Twiga had advanced periodontal disease, which was hugely impacting on her quality of life. Whilst it was not the outcome our teams had hoped for, it was incredibly important to have this information so that we could make the best decisions for her quality of life based on these medical diagnostics.

Where are we now!? Six months on and we have continued this training using the same methodology with 8yo female Nakuru and 18month old male Klintun. We have taken dental radiographs of Nakuru and we are very nearly ready to attempt this with Klintun. This will allow us to have baseline information into each of their dental health conditions, allowing us to track changes as they continue to age.



*Dr Paul taking dental radiographs of Twiga*



*Twiga's radiograph*

**Note: (pics taken pre-COVID-19 restrictions)**



*Keeper Georgie Greig training Nakuru for Dental X-rays*

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## TWELVE MONTHS IN THE ORANGE-BELLIED PARROT CONSERVATION PROGRAM AT MOONLIT SANCTUARY

*Ashley Herrod, Avian Threatened Species Coordinator, Moonlit Sanctuary*

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*Picture above: Two OBPs from the Mainland Release Trial foraging on Beaded Glasswort in Western Port Bay. Photo by A. Herrod*

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There is never really a quiet time of year in the Orange-bellied Parrot (OBP) program. Moonlit Sanctuary is involved in three major aspects of the recovery of the species: captive breeding, release and head-starting/ranching. As a result there is always something to do, report on or plan. It really does feel like as soon as one aspect of the program is done for the year, another one begins without a break in between! This article is a brief look at a year with OBPs at Moonlit Sanctuary, with a focus on the three major aspects of the program that I have mentioned.

I will begin by saying that the recovery of OBPs is a collective effort, and for our involvement in the program we collaborate closely and regularly with ZAA, Zoos Victoria, Department of Environment, Land, Water and Planning (DELWP), Department of Primary Industries, Water and Environment (DPIPWE), University of Sydney and the OBP Recovery Team. With Lisa Tuthill (Moonlit Sanctuary's Life Sciences Manager) and myself being

the OBP Species Coordinator and Studbook Keeper respectively, we keep in touch regularly with the other institutions that have OBPs, particularly in regards to breeding recommendations, release, reporting, deaths and transfers.

### **Juvenile Release**

This is the first main event in the OBP calendar year occurring during February and involves the transfer of captive-bred juveniles from multiple captive-breeding institutions, to Melaleuca, Tasmania for their release to the wild. The aims of the juvenile release are to maintain wild behaviours in the wild population by giving captive-bred released juveniles the opportunity to learn from wild-bred birds, and to determine whether younger captive-bred birds are more successful at migration compared to captive-bred released adults (1).





*Final visual health-check before sending OBP to Tasmania for Spring release. Photo by L. Arabena*

Leading up to the transfer of the juveniles to Melaleuca, preparation begins in December when the birds are still chicks in the nest box and they are feather sampled for DNA sexing, leg-rung and vet-checked involving collection of a blood sample for Beak and Feather Disease Virus (BFDV) testing. This testing is also extended to all nest mates even if they are not proposed for release. If the birds pass their health checks and are BFDV negative, and are included in the final selection of birds for release, they are caught at between 8-10 weeks of age (age of independence) and sent to Melaleuca via Hobart for release.

This year 49 captive-bred juvenile Orange-bellied Parrots (from various breeding institutions) were released at Melaleuca. The target was actually 50 but just prior to release one bird pulled up unfit while still in the release aviary and was returned to captivity.

### **Headstarting and Ranching**

During March in years when the OBP Strategic Action and Coordination Group has previously determined that head starting and ranching is required for the year ahead, we receive a group of wild-caught OBPs from Melaleuca from DPIPWE's OBP Field Biologist. There are two types of birds involved in this conservation technique, which involves the capture of birds from the wild at the breeding ground prior to the birds' northward migration to the mainland and holding them in captivity during the winter. Headstarting is the capture and holding of first-year wild-bred juveniles, with the objectives to improve survival of wild-born juveniles (particularly females) in their first year; maximise breeding opportunity in their first year and; reduce the number of captive birds required to meet recovery program release objectives<sup>1</sup>. Ranching is the capture and holding of captive-bred adults that were released the previous Spring, with the objectives to improve female survival between breeding seasons; maximise future breeding opportunity and; reduce the number of captive birds required to meet recovery program release objectives (1).



*Three-week old clutch of four OBPs in the breeding facility. Photo by A. Herrod*

The birds are in our ranching facility from March through to September, and are treated as a separate quarantine flock, completely isolated from our breeding facility and display OBPs, and serviced by a dedicated group of keepers. Prior to the ranched birds being returned to the wild, they undergo vet health checks, blood screening, BFDV testing and faecal screening. If they pass their health check and tests, they are transferred back to Melaleuca via Hobart for release to the wild.

### **Mainland Release**

Occurring in April for the past four years is the Mainland Release Trial, where immature and adult OBPs from various institutions have been released on the mainland in Victoria at specific locations. The trial aims to establish released flocks in non-breeding habitat, in an attempt to improve the habitat selection and survival of naturally migrating wild birds (2). For release in April, birds enter quarantine in late Feb/early March. This involves a period of 4-6 weeks



*Bank of OBP breeding flights in the breeding facility. Photo by A. Herrod*



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quarantine, health checks and one round of BFDV testing. Birds released in the mainland trial are typically a mix of young and adults of both sexes, from various zoos in the OBP program.

In previous years Moonlit Sanctuary has contributed birds for the mainland release trial. This year we went a step forward and collaborated in a bigger way by carrying out a release of our own under the project. The release site was only a short trip from the Sanctuary, on private property adjacent to OBP saltmarsh habitat in Western Port Bay. A purpose-built pre-release aviary was constructed at the release site in February, when the first lot of birds went in it. A second group entered the aviary in March, and the whole flock (13 birds in total) were released in April. During the period the birds were in the pre-release aviary, it was a busy time, with conservation training in the aviary taking place daily. Five months post-release we have confirmation of some of the bird persisting in the area, despite COVID-19 restrictions preventing us from doing ongoing field surveys throughout the winter period, but that is a whole other story for another time.

### **Breeding preparation**

During July and August preparations are made to set up the OBP breeding enclosures for the upcoming breeding season. All 20 of our breeding enclosures are thoroughly stripped and cleaned out. Then new perches are hung, new nest-boxes are built and installed, and browse and a large potted native plant are added to every enclosure. Food bowls are taken out of storage and re-washed, stocks of vitamin and mineral supplements are checked and ordered, and any other preparation is done. Everything is then ready for pairing up birds at the start of September.

### **Spring Release**

As the name suggests Spring release occurs during Spring, in particular late September and into October. This release event involves the transfer of breeding-age male and female OBPs from various captive-breeding institutions to Melaleuca, Tasmania for their release to the wild. The main objectives of Spring release are to supplement the wild population by increasing the number of potential breeding pairs at the breeding grounds to increase reproductive output, and balance any bias in the sex ratio that might be predicted in the birds that are migrating back naturally<sup>1</sup>. Quarantine for Spring release birds begins in July and the birds must undergo two rounds of vet health checks and BDFV testing along with faecal screening and routine blood screening for haematology examination. This year we split our initial Spring release cohort in to three separate quarantine groups to reduce the risk of having to re-test a majority of birds that may

have come in to contact with a bird that failed screening. This means setting up and servicing three quarantine enclosures at the highest level, but has cost benefits in the long run and increases the chances of more birds making it through to the final selection of birds for release. After all groups passed both rounds of testing, we merged them in to one group soon before they were transferred to Hobart and then on to Melaleuca for their release.

### **Pairing birds and the breeding season begins!**

At the start of September our OBPs are caught and health-checked after spending all the Autumn and Winter in our two large flocking and socialisation aviaries. As per the breeding recommendations for the year, birds who have been selected to go into a breeding rec are arranged health checked and put into pairs, one per breeding enclosure, in one of our two breeding banks.

Some females start investigating their nest box during September, but most are doing so by the second week of October, chewing and rearranging the wood shavings to form a depression/nest scrape where the eggs will be laid. This activity can occur for up to two weeks prior to egg laying. The first eggs of the season can be laid in late October, with the majority in mid November, and later clutches in December. This sees chicks hatching in November through to January. The incubation period is 20-21 days and chicks typically remain in the nest for around 35 days.

This is a very busy time of the year, with lots of data collection and record keeping necessary to keep on top of how each pair and their eggs and chicks are progressing during the breeding season. As chicks hatch and grow, diets are regularly changed to increase the food available for the parents. We also spend time picking a lot of wild seeding grasses and weeds from within the park for our breeding pairs, which provides a fresh green living source of different seeds as well as variety and enrichment.

Keeping a close eye on things can often prevent problems from happening, such as chicks falling behind from parental neglect. When parents aren't doing an adequate job, options are to supplementary feed chicks in the nest, foster them to another pair of OBPs, or pulling the chicks to hand-rear. Hand-rearing is a time-consuming task, at home and at work albeit rewarding in the end and bringing satisfaction to the staff involved. I think our partners at home come to expect us bringing chicks home from work with us at some point during the breeding season!





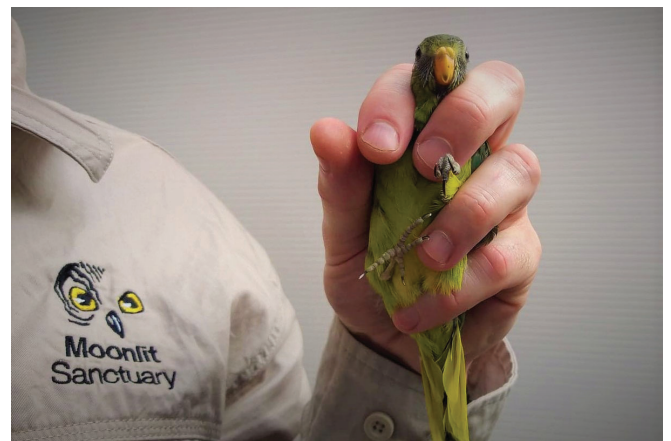
*Moonlit Keeper Brodie Zealand radio tracking OBPs. Photo by B. Bunter*

Prior to fledging, all chicks are fitted with a leg ring, are health checked and feather sampled for DNA sexing. Once all the chicks have fledged and are independent (from 8-10 weeks of age), and any juveniles selected for Juvenile Release have been transferred to the wild, we clean our two flocking aviaries and install new perches before flocking all birds from our bank 1 breeding flights together, and all birds from our bank 2 breeding flights together, for socialisation, exercise and enrichment. OBPs are a social species outside of the breeding season and our birds seem to enjoy being in a flock during this time of year and being in a much larger aviary than the breeding flights with plenty of room to move.

The OBP program has many facets with something always going on. I hope this article has briefly captured the key events that take place throughout the year in the OBP world to give you some idea of what goes on at Moonlit (and to some extent the program in general) with these fascinating birds.

### **References:**

1. Troy S (2020) Melaleuca report: report on the Melaleuca Wild Population 2019/20. Department of Primary Industries, Parks, Water and Environment, Tasmania.
2. Pritchard R, Magrath M, Penrose K and Agterhuis S (2018) Orange-bellied Parrot Mainland Release Trial 2018 Report. Department of Environment, Land, Water and Planning, Victoria.



*OBP chick ready to fledge, being inspected for juvenile release selection. Photo by L. Arabena*

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# The most threatened species of gull in the world, takes up residence in Christchurch earthquake remains.

JENN BOWLES

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For the second year in a row, a colony of around 300 endangered Black-billed gull (*Larus bulleri*) (above), have made the ruins of the former PWC building site on Armagh St, in central Christchurch, their unconventional nesting site.

Nine years on from the earthquake that decimated many of Christchurch's business district buildings, these gulls have made use of the lengthy insurance claims, that has seen damaged areas of Christchurch sit stagnant for years, awaiting settlements.

The flooded sub foundations and remaining rebar-twisted concrete framing, surrounded by two meter high iron fencing, has made for a predator controlled opportunistic sanctuary, that this returning colony has utilised.

Endemic to New Zealand, the Black-billed gull/ tarāpuka, is the only gull in the world classified as Endangered on

the IUCN Red List (2020). Breeding sites are habitually along island refuges within the braided rivers of the South Island. Populations have declined for decades, with these riverbeds seeing many birds fall prey to pest predators, namely mustelids, feral cats and rats. Recreational vehicles in riverbeds, driving through colonies, has also played a part in decreasing numbers. Braided rivers themselves also make for risky nest areas, with flooding a possibility to potentially wipe out a season of hatchlings in one flood, though most riverbed nesting birds have adapted to nest successfully within these risky sites.

Black-billed gull, while similar in stature to other more common gull species, are distinguished by having a distinctive long thin bill which as their name suggests, is black. This makes them dissimilar from the bright red bill of the more common red-billed gull/ tarāpunga. Black-Bills are a paler white/silver in their wing feathers and display a thin, black bordering on their wingtips.





Protected wildlife in New Zealand falls under the protection of the Wildlife Act (1953), resulting in any disturbance of these gulls, while they reside within their chosen city nesting site, carrying a fine of up to \$100,000 and/ or imprisonment.

The Department of Conservation and landowners have previously worked together to enable the gulls to safely nest at this central Christchurch site, while a petition in 2019 was circulated to protect this site for future nesting.

**Source:**

Department of Conservation (NZ). <https://www.doc.govt.nz/>  
IUCN 2020. The IUCN Red List of Threatened Species. Version 2020-2. <https://www.iucnredlist.org/> Wildlife Act 1953 (NZ). <http://www.legislation.govt.nz/act/public/1953/0031/latest/whole.html>

**Photography:**

Wilding Photography

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## From the President cont. (from inside cover)

We are dearly hoping to be able to safely resume some of our normal annual calendar events with our members in 2021, with hopes for our Rockhampton Zoo Annual Conference and AGM, as well as workshops, online webinars, and our Bowling for Sumatran Sun Bears fundraising campaigns, on behalf of the SSBT.

So Bear with us, keep an eye on our website and social media updates, and spread the word about ASZK to your colleagues so that we can build a broader network while we work on developing our 2021 Members' Benefits tailored to the needs of our valued Members. Please visit [www.aszk.org.au](http://www.aszk.org.au) for Membership options and renewals. The whole ASZK Committee extend our gratitude for your ongoing support.

Chris

# BEHAVIOUR matters



## BRACHIAL BLOOD WITHDRAWS “MURPHY” (CALIFORNIAN SEALION) *Jacob Stek*

Traditionally at Taronga our Seals have been trained for voluntary rear flipper blood withdrawals, but history tells us that the vein in the rear flippers can be prone to collapse, resulting in no blood being taken. This led us to take on the challenge of training brachial blood withdrawals with our Californian Sea lion, Murphy. The training of this behaviour took a number of months with many small approximations, so what better time to train this behaviour than throughout COVID! From voluntarily shaving Murphy’s arm pit, to having him dry and out of water for 15 minutes, then the “stick” (needle insertion) of different size needles working towards the size of 21g and promoting the vein through a number of ways such as a warm water towel on the area of the vein and pressure on the joint of the front flipper to pulsate the vein. It was clear that this behaviour was going to take a number of approximations.

Having Murphy in a half ventral Inspection position “VIP” “was the ideal position to draw blood from the flipper, it was also a challenge to have him roll over and stop half

way, and have him hold in that position for anywhere up to 10 minutes.

Ultimately the behaviour took a total of four months to train until we were able to draw blood successfully.



# Dare To Dream, Dare To Fly

**BIANCA PAPADOPOULOS, NICOLE NEWELL, CLARE MANSON AND AARON TOLLEY  
MELBOURNE ZOO, ZOOS VICTORIA**

Walt Disney once said “First, think. Second, believe. Third, dream. And finally, dare. Follow these four steps and there’s nothing you can’t do”. He taught the world to dream big, and when it comes to this tale we are about to tell, that is precisely what we did.

Over the years, Melbourne Zoo has run different activations onsite to promote visitation and ensure that new, exciting events were occurring year round. In April 2019, the animal training coordinator (ATC) pitched an idea about undertaking an activation around showcasing the training that keepers undertake with the animals for proactive health care, as well as seeing if we could give some animals the choice to leave their habitats and be given the opportunity to undertake species-specific behaviour outside their habitats for mental stimulation and exercise.

From the time the activation project was approved in early June, there was a total of 14 weeks to get a small team together of four keepers and to plan with the life sciences teams, which animals would be suitable candidates for the project and what the finished product would look like. That is right, 14 weeks!!

The activation was to run from 14th September – 10th November and would include new, daily presentations and encounters focused on healthcare, enrichment, choice, exercise and mental stimulation, which encompasses important aspects of animal welfare.

This project was not going to be an easy feat with extremely tight timelines and attempting things we had never done before. By the end of June, the ATC had established a small animal training team of four keepers and also enlisted the help from Natural Encounters Inc. President Steve Martin and one of his team members, Chris Jenkins. Steve and Chris flew out from Florida and spent the first week with the team in early July. During that week, we worked with several teams to identify which individual animals would be suitable for the program. The list started off extremely long at over 65 individual animals and, over the week of working with the animals and bringing together the final picture of what the project would look like, we landed on 34 individual animals.

It was decided that eight birds would be chosen for a free-flight presentation, 3/8 birds had done so previously but that was over 15 years ago! The bird species included Blue

and Gold Macaws, Eclectus Parrots, Major Mitchells and Rainbow Lorikeets. A male coati named ‘Floppy’, a male red panda named ‘Seba’, two female Australian Pelicans named ‘Pip and Percy’, a group of six male Guinea Fowl, a group of six male squirrel monkeys and a group of 10 male Ring-tailed Lemurs were also incorporated into the project.

Melbourne Zoo’s historic Carousel Park was transformed into Keeper Care Hub, which saw a brand new presentation space created, where three times a day a presentation named Keeper Care Tales would be conducted by the training team. This presentation was all about how keepers care for the animals at the zoo and included a mixture of eight free-flying birds, Guinea Fowl and a male coati that participated in various care activities, including recall, voluntarily getting onto a scale, voluntary crating and natural behaviours such as digging and smelling. Throughout the day, the training team were also responsible for several other presentations and encounters that included:

- 2 X Pelican Presentations
- 1 X Red Panda Presentation
- 1 X Red Panda Encounter
- 3 X Keeper Care Tales at Keeper Care Hub
- 1 X Lemur Presentation
- 1 X Squirrel Monkey Presentation

It wasn’t just the training team that was going to be showcasing the care we provide our animals, all of the life sciences teams assisted in the activation. They did so by highlighting different animal care events (ACEs) such as training, enrichment and feeding each day on brand new A-frames that were purchased for each trail of the zoo.



*Wild Sea A-frame to showcase animal care events occurring in that area on that particular day.*

This allowed visitors more opportunities to see these activities that would usually either take place back of house or in the habitat unannounced and visitors were unaware of them happening. The boards also allowed keepers the flexibility in adjusting times and activities based on the day ahead. A keeper from each precinct would adjust the board accordingly each morning. The ACEs were different from activities listed in the visitor map and varied from offering between 20 – 50 different activities a day throughout the zoo.

Once Chris Jenkins and Steve Martin flew back to the states, Chris would return in a month's time to spend another four weeks with the animal training team helping bring the project together.

**T-MINUS 10 weeks**, that's 70 days for those following at home to not only train birds to free-fly from scratch but also new behaviours with Floppy the Coati, Pip and Percy the Pelicans, Seba the Red Panda, the Ring-tailed Lemurs and our group of Guinea Fowl.

### **Training The Birds To Free Fly In 10 Weeks!**

Although some of the birds had previously flown outside years before, a big challenge for the team was getting the birds' condition up in just several weeks to be strong enough to fly outside over long distances and in challenging weather conditions.

All the birds were already trained to step into their own crate so that they could be transported around the zoo, however they had previously only worked with a very small team of keepers and had a very predictable daily schedule, making them very wary of anything out of the ordinary. One of the first steps in the birds' training plan was to change their routine on a daily basis, exposing them to as many different people, environments and stimulus as possible. This meant feeding the birds at different times, with different people and taking them around to different locations in the zoo. We also modified the bird diets so that they only received "training reinforcers" like nuts, seed and pellets when out of their aviaries and then a big meal and enrichment when they returned home.

Most of the birds had previous experience flying very short hand-to-hand flights inside our kids' education centre, so once we saw that the birds were comfortable with their ever-changing daily routine, we started taking the birds out of their transport crates in other indoor rooms around the zoo and started to fly them in these locations. The birds very quickly became assimilated to flying in different spaces, with all different staff around,

and soon it was time for them to experience flying longer distances in more challenging conditions.

We were fortunate enough to have our lemur enclosure available, which allowed us to fly the birds in a large, netted outdoor space that also had plenty of distractions in the form of zoo visitors and our group of Ring-tailed Lemurs! We were also able to use tall ladders in this area to teach the birds how to fly down from a hand to a keeper below, simulating the skills they would need to fly down from a tree branch once they were taken fully outside.



*Trainer Aaron training Eclectus Parrot 'Lameroo' for fly downs in our Ring-tailed Lemur exhibit. (pic taken pre-COVID-19 restrictions)*

This was particularly important for our male macaw as he was a young bird, had very little experience flying outside of his aviary and wasn't a confident or skilled flyer. The birds very quickly became used to this new environment, learning to ignore the visitors and lemurs around them and becoming skilled at adjusting their flight in weather conditions such as unexpected wind buffs.

And then the big day arrived! Their first real flights outside took place as short hand-to-hand flights just outside their aviaries. As the birds' confidence increased (and all the birds experienced a couple of flights that landed them in trees where they had to work out how to



get back down to the keepers on their own!) we gradually increased the distance of the flights. Some of the bird aviaries were within a couple of hundred metres of the presentation area and it was planned to fly these birds to and from their aviaries daily (although this meant training the birds to fly past or over a noisy, moving heritage carousel). This was achieved by keeping the trainer at the aviary in the same place for repetitive flights backwards and forwards, but moving the other trainer further and further backwards until they were out of sight at the presentation area.

The other birds lived in an aviary much further away so a holding area was constructed close by the presentation area for them, complete with holding aviaries. Before each presentation, the birds would be brought to the area in their transport crates, the crates would then get opened and the birds would fly from the crates to their own individual aviaries and then during the presentation the birds would fly out from and return these spaces. The birds also had the choice to crate themselves, so if at any point those choose not to crate, they didn't take part in the presentation.

In the early days, there were many factors that made the flights to presentation area challenging: the birds learning to cope with the weather, the long flights and other wild bird species such as sea gulls and miner birds. In the beginning these distractions would often cause the birds to miss their landing and lead to them landing in a tree somewhere around the zoo. However over time, the birds' confidence increased and their understanding of the layout of the zoo strengthened to the point where, even if they did miss their landing on a rare occasion, they simply circled around and came back in again. At this point, we knew they were ready for our new presentation!

## New Presentations

As part of the project, we also developed brand new training presentations for Red pandas, Bolivian squirrel monkeys and Ring-tailed Lemur. All of these were run once a day for a duration of around ten minutes, and were held at their habitats, allowing us to give visitors a front-row seat to the training and care we provide and, of course, a chance to see the animals up close. The Australian Pelican presentation ran twice daily for 10 minutes each time.

Our training was based around healthcare and we were able to showcase some of the remarkable work we do at Zoos Victoria. We gave live demonstrations of animals choosing to participate in healthcare tasks such as obtaining weights, stationing and crating, and each presentation was developed with a rich understanding of

each species' natural history and adaptations. Presenters used microphones and talks would often draw large crowds. We gave visitors the opportunity to ask us questions directly and share our community conservation campaign messages.

We also developed a close-up encounter with our male Red Panda, Seba, and the encounter was a sell-out for the entire season (every day was booked out in just the first week that we released tickets). This allowed four visitors to enter the habitat at the end of the training presentation and feed Seba using a specially designed feeding cup under keeper supervision. It's the first time in Zoos Victoria's history that we have offered a red panda encounter and visitor reactions were incredible, with some guests moved to tears by the opportunity to see an endangered animal so close.

A ton of work went into building these training presentations in the short lead up to going live, particularly as we were training some animals in behaviours that were not yet established, or were brand new! One great example is the work we did with our two female pelicans, Pip and Percy. This presentation involved giving the girls the choice to leave their habitat for the first time, walking along the visitor boardwalk, stationing in a presentation space and stepping onto both scales and a specially designed podoscope, allowing visitors to see how we check their weights and feet. We achieved this through a series of approximations, with the girls showing us in their behaviour how ready they were to move to the next step.



*Trainer Nicole and Pip the pelican on the podoscope showing visitors how we check their feet health on a daily basis (pic taken pre-COVID-19 restrictions)*



To make our talks engaging as well as informative, we included some interactive fun where we could, such as asking young visitors to jump on the scales themselves and guess the weights of the birds. Making memories for our visitors was a big part of our vision.

We developed our talks using Zoos Victoria's 'connect, understand, act' model, in collaboration with all life sciences teams, the conservation team and our welfare specialists. Through these presentations, we were able to bring more awareness to these beautiful species, highlight our conservation goals, and show visitors how the animals in our care are able to participate in their own healthcare, training and enrichment programs.

As a Zoo Based Conservation Organisation, at each of our presentations it was important to convey a message to our visitors enabling them to support one of our fighting extinction species campaigns. For the project period the chosen species to support was the Mountain Pygmy Possum (MPP), which is one of Zoos Victoria's fighting extinction species. Zoos Vic designed tote bags and for every tote bag sale we committed to plant a food tree in the wild to help save the critically endangered MPP. We asked our visitors to purchase a tote bag to help support the MPP at each presentation.

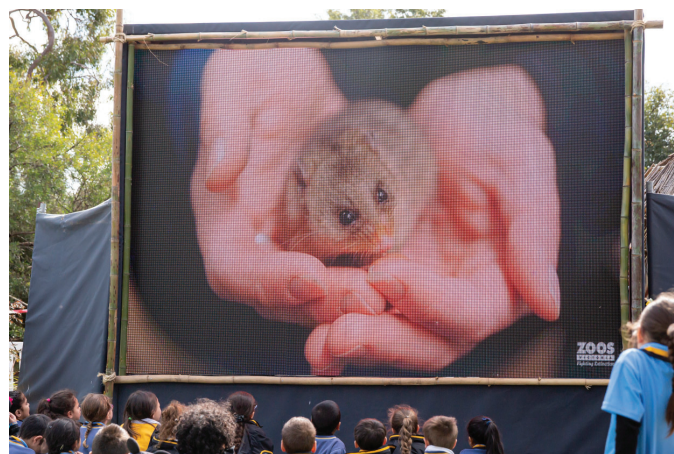


*Trainer Clare talking about our Tote Bags for sale to raise funds for the Mountain Pygmy Possum in our Keeper Care Tales (pic taken pre-COVID-19 restrictions)*

The message of care in all presentations carried over to our FE species and the work we do to protect them in the wild. In turn this led to visitors purchasing 4452 tote bags during the project. This meant Zoos Victoria could go and plant 4452 food trees for the MPP!

## **Keeper Care Tales**

Keeper Care Tales occurred three times a day for around 30mins each time and it was the main presentation of the project, which took place in the transformed area of our already existing carousel park that was renamed Keeper Care Hub. Keeper Care Hub included a new presentation space and an extremely large TV screen next to that space, which would play videos to aid in telling the story during the Keeper Care Tales presentation.



*The TV screen placed in Keeper Care Hub helped us tell the story of the plight of the Mountain Pygmy Possum*

Outside of the presentation, the TV footage was on a 45-minute loop showing a collection of stories of how our keepers care for our animals through the use of animal training and enrichment. This allowed us the opportunity to continually be able to showcase our care, even outside of the presentation times.

The presentation included segments from the group of Guinea Fowl, a Rainbow Lorikeet, an Eclectus Parrot or Major Mitchell, Floppy the coati and the Blue and Gold Macaws. There were also three sections within the presentation where we would use visitor involvement, mainly children, to help create those everlasting connections with our visitors and our animals.

It started with a clip from the TV screen setting the stage for the presentation, and then it went to a trainer and a visitor showcasing how the Guinea Fowl recall with the use of some bells, as they are free-roaming animals in the zoo. The Guinea Fowl would station on a stump in the presentation area whilst the visitor threw it some mealworms.





*Trainer Mark and a young zoo visitor helping recall and feed the Guinea Fowl apart of Keeper Care Tales (pic taken pre-COVID-19 restrictions)*

The guineas would then recall away and the Rainbow lorikeet would fly out to the area and two more visitors would be chosen to help demonstrate how we would teach the lorikeets to fly from A to B for exercise.



*Rainbow Lorikeet 'Franklin' undertaking some A to B's apart of Keeper Care Tales*

Once the lorikeet returned, an Eclectus Parrot or Major Mitchell would fly out to the area and demonstrate how we ask the birds to weigh each day.

That individual would then demonstrate its flying ability from trainer to trainer from one side of Keeper Care Hub to the other. After the parrot was back in its habitat, Floppy the coati would enter the presentation space and demonstrate a range of different natural behaviours such as climbing, jumping and digging. A visitor would add some mealworms to a mulch area prior to Floppy coming out, so he could show his amazing sense of smell.

We would also ask Floppy to enter his transport crate for visitors to see how we work with the animals in them being active participants in their own healthcare.



*Trainer Mark with Eclectus Parrot 'Lameroo', demonstrating daily weighing in Keeper Care Tales (pics taken pre-COVID-19 restrictions)*



*Trainer Nicole and coati 'Floppy' demonstrating choice in how we ask Floppy to move from place to place and crate himself (pic taken pre-COVID-19 restrictions)*

Whilst Floppy was being secured out the back of the presentation space, a video would play on the screen about the MPPs and their plight in the wild. Once the video ended, the two Blue and Gold Macaws would come flying in from their habitat and help us showcase the care we provide them and tell the story of the MPP tote bag that visitors could buy to help us save the MPPs from extinction.

The macaws would fly back to their habitat and that would conclude the end of the presentation.



*Trainer Nicole and Blue and Gold Macaws ‘Goldie and Pablo’ in Keeper Care Tales (pic taken pre-COVID-19 restrictions)*

## Project Summary

The project had several key performance indicators (KPI) established to measure the success of the project. A few examples of these were: total visitation, tote bag sales, Red Panda encounter occupancy and visitor surveys. Below is an example of some of these metrics for the period of the project.

| KPI                 | Target  | Actual  |
|---------------------|---------|---------|
| Tote Bag Sales      | 1,936   | 4,452   |
| Encounter Occupancy | 114     | 212     |
| Visitation          | 264,644 | 237,186 |

The project was deemed a success due to not only the KPIs, but also the welfare outcomes that were achieved with the animals during the project.

The project would not have been such a huge success without the help of the amazing and extensive team that were involved in the project. It wasn't just the training team of Nicole, Clare, Aaron and Mark, Bianca the Animal Training Coordinator, Steve Martin and Chris Jenkins from NEI, but we also had a project control group (PCG) and project working groups (PWGs) that made it all possible for this to come to life. Those groups included a range of stakeholders from across the organisation from teams including life sciences, horticulture, assets, community conservation, welfare, marketing, public relations and visitor experience.

The free-flight birds continue to fly around the zoo daily and we look forward to incorporating new presentations to carry on messaging for the incredible work we do fighting extinction. So let's end where we started with a quote from Walt Disney "If you can dream it, you can do it". We hope that this article inspires you to do just that.

*Below Blue and Gold Macaw ‘Goldie’ flying around Melbourne Zoo*





*Posing for some photos in their enclosure, from left to right Cinder, Blaze, Amber and Scorch. Courtesy of Fiona Rose*

## When Two Packs Become One: The Systematic Introduction Of Four Dingoes Into The One Enclosure

*Kiandra Phillips, Mammal Coordinator, Moonlit Sanctuary*

For the last five years, Moonlit Sanctuary has been home to two pairs of Alpine Dingoes. These separate packs have lived at opposite ends of the park, all ambassadors for their species but creating connections with visitors in their own way. One duo, sister and brother, Blaze and Scorch, are the social butterflies, sparking emotion and close connection by interacting with visitors one-on-one through daily encounters. While the other duo, sisters, Cinder and Amber, demonstrated their agility, intelligence and awe, presenting a routine in our daily “Conservation in Action” show, emphasizing a dingo’s importance in our ecosystems.

However, earlier this year it was decided that Moonlit Sanctuary would welcome a new pack, another brother and sister duo who would also be trained for our “Conservation in Action” show, but in the form of puppies! As exciting as this news was it posed many challenges and conundrums that needed to be overcome in a few

months. Once the puppies were old enough to sleep in an outside enclosure they would be moved into Cinder and Ambers enclosure in preparation for their training. This meant that Cinder and Amber would need to move over with Blaze and Scorch, on display. Given the nature of their pack dynamics, their roles in the park and their individual personalities there were many factors to take into account, but most importantly this was a process that could not be rushed. At Moonlit Sanctuary we use a 5-week plan approach for training our animals. We create a plan using small approximation changes each week, then after the five weeks we reassess and create another 5-week continuation and proceed until we are satisfied our training is complete. The introduction of the dingoes would be no different with myself and Sian Mulhall, Show Coordinator, creating the plans and Lisa Tuthill, Life Sciences Manager, approving them.

But where to begin? All four dingoes have met on

numerous occasions but this has only been during their daily walk, whether one pair was being walked past the others' enclosure or occasionally all four dingoes were walked together. This is where our first 5-week plan would start; we would walk all four dingoes with a keeper per dingo, knowing that there was a possibility that being from separate packs we may encounter some disagreements amongst them. Having four keepers present on the walk meant that we could separate them more easily. Another challenge we needed to overcome was the sisters, Cinder and Amber's history of fighting on walks. They have on occasion, become over stimulated on their walks, especially in the presence of potential food such as road kill outside of the park, which would escalate to physical aggression with the potential for serious injury. For the safety of the dingoes and keepers it was previously decided that they would become conditioned to wear muzzles on their walks. So over the first five weeks all four dingoes were walked together daily, with Cinder and Amber being reconditioned to walk without muzzles. We started off walking a couple of metres apart then over the weeks coming closer together and reducing the number of keepers slowly to two. By the end of the first five weeks we would have two keepers, each walking a dingo from each pack, for example Cinder and Scorch were walked by one keeper and Amber and Blaze by another. We were ecstatic to have made it through without any major altercations, mostly just a few growls at the start of the walk but once we got going we could already see one big pack forming.

The next 5-week plan would focus on getting them interacting off lead inside of Blaze and Scorch's enclosure, their future home together. After their daily walk we would take Cinder and Amber into the enclosure first, allow them to walk around and explore for 5 minutes before putting them back on lead and doing the same for Blaze and Scorch. We would then let all four off lead together and allow them to run around and interact for 15 minutes before returning Cinder and Amber to their own enclosure. Over the five weeks, 15 minutes turned into a couple hours, then half the day and by the end they were spending all day together, only separated during night time. Once again we were excited that no major quarrels occurred during this time however it was becoming evident that the presence of keepers was quite over stimulating for them to the point that when we came to retrieve Cinder and Amber for the night we would often find them growling, with their hackles up at one another and essentially fighting for our attention at the single entry to the enclosure. It is worth noting that at this point the state of Victoria had just started its second lock-down phase due to COVID-19 which in this very specific situation worked in our favour as it meant that we were not also dealing with the presence of visitors potentially causing

further over stimulation. However, to help elevate the novelty of keepers arriving at the end of their play date, it was scheduled for keepers to regularly stroll past the enclosure in the hopes to decrease the excitement of the presence of keepers.



*Dingoes out on their daily walk.*

However, the presence of keepers was not the only catalyst for over stimulation, it was assumed the presence of food could initiate some conflict. This is something we were not willing to test via trial and error but going off Cinder and Amber's history it was better safe than sorry. During the previous 5 weeks construction had occurred within the Dingo enclosure, creating a second enclosure within it, located at the opposite end of the entrance. This new addition meant that the Dingo pairs could be fed separately but it also gave access to a second entry point to the enclosure, meaning that we could elevate the excitement of keepers arriving by separating and drawing each pair to the separate entrances. When Cinder and Amber were first brought over to the dingo enclosure in the morning they would be fed in the new enclosure with the internal gate shut while Blaze and Scorch were fed in the rest of the enclosure. Once all 4 dingoes had finished eating, they would be given access to the entire enclosure together. The same procedure was followed in the afternoon before returning Cinder and Amber to their enclosure.

It is important to note another challenge we were faced with during this whole process. Cinder has always shown more anxious traits compared to the other dingoes, quite often scared of new items or changes in the environment on walks, often seen off on her own and always the first to run up to keepers when we arrive. Even when she was in the "Conservation in Action" show she demonstrated some undesirable body language when on stage such as tucking her tail in and jumping at sudden movement or noises. This is something that Sian has put an immense amount of





*An inside view of the dingo enclosure, including the new internal enclosure. Courtesy of Brodie Zealand (1)*

time, training and effort in to help her overcome and we have seen some substantial improvement. Although she is no longer in the show we have observed a big decrease in anxious behaviour over her time spent with the rest of the pack.

It was not long until the much-anticipated night arrived when we would leave all four Dingoes in the enclosure together over night, officially moving Cinder and Amber in with Blaze and Scorch. By this stage we were quite confident that they had all formed close relationships and were indeed socialised enough to take this step. As predicted, when checked on first thing the following day, all Dingoes were fine and content with no evidence of any altercations overnight. Our Dingoes were officially a single pack.

It has now been two months since their first night together and I would be lying if I said everything has gone perfectly smoothly. Although no major fights have occurred there have been several minor disagreements as they are still ironing out the hierarchy amongst the females, it would seem that Blaze has taken top spot, as we predicted. However, no vet intervention has been required and the only injury to date was a small split in an ear. They are still fed in their separate enclosures but this may be something we re-assess in the future.

Being a single pack, this will not stop them fulfilling their ambassador roles. Upon re-opening, Blaze and Scorch will continue to interact with visitors during encounters, with Cinder and Amber separated and Amber will still make regular appearances in our presentation "Training Sessions" and our "Conservation in Action" show when it is back up and running post COVID.

The slow systematic introduction has meant that this potentially dangerous process has resulted in the best animal welfare and has alleviated copious amounts of stress involved, we have deemed it a massive success and can not wait to see the bonds of this pack grow stronger over time.



## TARONGA ZOO *Marine Mammals*

For the last two breeding seasons we have socialised long-nosed fur seals (*Arctocephalus forsteri*), female 'Keke' with our eldest male 'Bondi', both which are rescued animals from the Sydney area. Last year mating was sighted however we were unsure whether it resulted in a successful pregnancy. Her trainers have been working on her ultrasound for two years, and despite having her participate in many, we were unable to see anything due to her impenetrable double layer of fur. In the last few weeks, we noticed that she was holding her weight differently and saw movement from her lower abdomen and on palpation, pup movement was detected. Due to Keke's late stage of pregnancy, Taronga vets deemed it safe to x-ray her, and so this was done as a final confirmation. Keke has now been moved from Seal Theatre to Seal Bay to reside in the purpose-built pupping facility until she pups. For now, she is socialising on exhibit with the other seals but spending the night off display in the pupping area.

Australian sea lion (*Neophoca cinerea*), 'Nala' gave birth to 'Amalie' (named after her late grandfather 'Malie') in late July. Based on pup measurements recorded via ultrasound and timing of sighted matings, keepers were expecting

her to be born in August. However, we were pleasantly surprised at her arrival overnight. Nala has proven to be a fantastic mother, this being her second pup. Amalie is the first female Australian sea lion pup we have had born at Taronga since Nala was born in 2009.

Our 2-year-old Australian sea lion, Torre, was transported to Sea World at the end of September very successfully. Despite a last-minute change in flight time, he crated smoothly at Taronga and arrived at his new facility with confidence, taking food and swimming immediately after coming out of his crate at 3am. Keepers are in contact with his trainers on the Gold Coast and receive regular updates on his progress!

Franklin (pictured above with Bondi), our 11-year-old rescued Sub-Antarctic fur seal (*Arctocephalus tropicalis*) passed away during a procedure recently following a few weeks of deteriorating health. Franklin was a very quirky and unique individual and will be missed dearly by his keepers.

**Adrienna Van Gogh**

## **Cross fostering a hand raised koala Joey**

Our experienced mum Rubi had some trouble last summer with mastitis and was unable to feed her Joey. Keepers had to step in to hand raise her 7-month old, Luna. Once we got her teat preference right she was an easy raise, but we wanted to make sure she thought she was more koala than human at weaning. Knowing that her own mum Rubi was unlikely to take her back, we were lucky enough to have two other females that were raising older joeys.

Milawa, a first time mum was doing an excellent job with her Joey Ella who was two months ahead of Luna. A few weeks before Ella was ready for independence, we started introducing Luna (10 months) to mum Milawa during the day but she was still coming home with her keeper at night. Milawa showed an immediate interest in Luna, going over checking her out, and responding to her vocals. Eventually Luna was seeking out Milawa to sit close to her and rode around on her back. Two weeks later, Ella was separated and Luna was left in overnight. It was a success from that point on. Keepers were still coming to bottle feed Luna morning and night until weaning but otherwise the two were inseparable.



In a defining moment, Luna was offered the choice of her keeper or her foster mum, and she ran to Milawa.

Luna is now a well-adjusted 18-month old koala who is very tolerant of human interactions but does not seek out human attention or display negative attention seeking behaviours such as pacing. If there is a suitable female available, cross fostering can be pathway with more natural behavioural outcomes for the joey.

**Laura Chow**

## **Nocturnal House**

On June 15th, the Taronga Zoo nocturnal house closed its doors for the last time in its current form. After entertaining and delighting zoo visitors with Australia's cryptic dark loving critters for over 60 years, all inhabitants (including a few long standing keepers!) have moved to other parts of the zoo to make way for shiny new nocturnal exhibits. The new design incorporates both animal and keeper needs and we can't wait until we can once again open up the nobby house doors in 2022.



*The empty nocturnal house*

**Sam Bennett**

## **Bird Show**

Seven rescued Carnaby Cockatoos were transferred into Taronga Zoo from Kaarakin Black Cockatoo Conservation Centre, Western Australia, in 2019. These birds were originally intended for a new free-flight experience; however, the decision was made to incorporate six of them into QBE Free-Flight Birds, with the seventh, Pickle, being used for education behind-the-scenes. This is because when Pickle was housed further away from his keepers (in our larger outside aviaries), he started to engage in self-directed over-preening. Giving Pickle purpose and allowing him more human-animal interaction has seen Pickle's undesirable behaviours disappear. In addition to free-flight, Pickle has been trained to fly to and enter a nest box within our facility. It is hoped that meeting Pickle will empower people to install these nest boxes in their own backyards. Pickle also engages in regular free-shaping sessions, whereby his primary trainer, Erin Davidson, brings him into a





stimulus-rich environment, and reinforces new or novel behaviours as he offers them. It is hoped we can get many of Pickle's broad behavioural repertoire under stimulus control, thus potentially allowing for more meaningful interpretation with our behind-the-scenes experiences. Pickle has also been trained so that if he approaches a ceramic bowl he has the power to end his training session.

The other Carnaby's have commenced basic husbandry training, including stepping onto hand, weighing, and loading into transport carriers. It is hoped that this flock will be introduced to QBE Free-Flight Birds during 2021. Carnaby's Cockatoos are listed as endangered and are known for the characteristic "wee-loo" call. We hope to share this with our visitors.

**Brendan Host**

## **Taronga Institute of Science and Learning**

We have had some staffing changes at the Institute with keeper Grace going on a six-month rotation out to Taronga Western Plains Zoo. Klay Cameron from bird show team has stepped in to Grace's shoes for the time being and is busy learning the ropes. Classes have now resumed onsite and schoolchildren are able to get up close with a range of fauna and see them displaying natural behaviours, including some new behaviours we have been working on while classes were cancelled – Marley the sugar glider is now wowing students with his gliding routine!

Just before classes were opened up to schools, we had

some new additions in the woodlands classroom with two superb parrot chicks hatching. First time parents Cersei and Tywin are doing a great job raising the chicks who are growing rapidly and will be out of the nest box meeting students in the blink of an eye.

**Andrew Daly**

## **Primates**

The primate unit has been busy as usual over the last few months.

Our chimpanzee group has grown by one with female, Naomi, giving birth to a female infant on the 7th of October. This very special infant has been named, Niambi. This is a Swahili word meaning melody. She was named by Naomi's obstetrician and sonographer as they have been such an important part of Naomi's pregnancies. Naomi has had two previous pregnancies, both resulting in still born infants. She has been under the care of an obstetrician and it was discovered that she has had problems with her placenta so it was decided to plan her next pregnancy under the guidance of vet staff and her obstetrician, Dr Paul Fowler. Naomi had other ideas and despite being on the contraceptive pill, keepers noticed her increasing size and appetite. Naomi came to Taronga several years ago with some history of trained husbandry behaviours. Being a very clever and willing chimp, primate keeper, Katie Hooker, decided to speed up her ultrasound training with Naomi to see if it was possible to follow her suspected pregnancy through ultrasound. Something that has never been attempted in Taronga's

chimp group. A few weeks later, Naomi, Katie and head vet Larry Vogelnest, performed her first ultrasound and pregnancy was suspected. A few days later Naomi's obstetrician and sonographer attended a training session and the pregnancy was confirmed. Spine, head, hair and a strong heartbeat were all detected, just like a human ultrasound. The baby was more developed than expected and Naomi was considered almost full term. Her placenta looked healthy and Naomi had regular ultrasounds from then on. Despite the ultra sounding itself being an incredible achievement, it was done without needing to separate Naomi from the other 19 chimpanzees and Naomi would participate in sessions for as long as required. Sometimes up to 15minutes and surrounded by other chimps hoping to receive some sultana or fruit treats too. An incredible feat. Naomi's infant appears strong and healthy and Naomi has proved herself as a protective and attentive mother.



*Chimpanzee infant, Niambi. Photo credit: Laura Fidler*

After the hurdles faced by the addition of the two squirrel monkey males, Vampir and Vivo, keepers have been thrilled to welcome five new monkeys into the group. Females Inca, Luna, Naia, Tumaia and Yaama all gave birth to healthy infants in the first few weeks of November. Two females, Alma and Yolanda also gave birth to infants although unfortunately Alma's mother, Ayaca, took her infant and refused to give it back. After close monitoring the infant became weak and intervention was needed. Unfortunately, the infant did not survive. Ayaca has not been seen to take any other infants and Alma was a first-time mother so hopes are

high she will have a better outcome next season. Yolanda was also a first-time mother and was seen labouring early one morning. Considering they usually give birth overnight she was rushed to the Taronga Wildlife Hospital and a caesarean section was performed. The infant was deceased and was very large. Too large to have been birthed naturally. Yolanda recovered very well and is currently trying to assist her own mother, Yaama, with her sibling.



*Squirrel monkey female, Naia, with infant. Photo credit: Laura Fidler*

Major construction works have been happening in the chimpanzee, White-cheeked gibbon and Francois langur exhibits with some much-needed maintenance and renovation work being completed. Keepers have been challenged with managing the large chimpanzee and langur groups in smaller spaces and ensuring the sensitive gibbon pair have been enriched and monitored while in their dens throughout the construction work.

**Laura Fidler**

## CURRUMBIN WILDLIFE SANCTUARY

In the midst of all the COVID craziness of 2020 we had some weird and wonderful moments here at Currumbin Wildlife Sanctuary (CWS). After many years without a breeding group of Brush-tailed rock-wallaby at CWS, our breeding pair which were introduced in 2019 have produced a joey with a second joey already in the pouch. The first joey would have to be one of our most photographed animals this year – so photogenic! (Pictured below)



Our native mammal team has also successfully bred a bunch of koala joeys this year, a Greater Glider, an echidna puggle and despite the lack of flights in the country we received the stunning Goodfellow's tree kangaroo 'Torembi' from Taronga Zoo.

Our Koala Specialist, Sarah Eccleston, became a Children's author this year with the launch of her Children's book 'Have you seen a tree for me?'. This beautiful story is about a young koala 'Enzo' who sets off to find a new home. Enzo is a real life koala here at Currumbin Wildlife Sanctuary and has, like Sarah, received lots of publicity over past few months! (Pictured below)



Our bird team have been just as busy, having bred our Regent Honeyeaters, Eastern Whipbird, Star finches and of course the critically endangered northern Eastern Bristlebird. This year has been tough for the Eastern Bristlebird (along with many other species). Fire ravaged many of the populations in the wild and resulted in loss of habitat and the decline in numbers. Our captive breeding program also endured some setbacks this year with some health issues identified. Luckily we have been able to get on top of these issues and have had success this season (so much success that we have literally run out of room for housing more offspring). Recently our bird supervisor, Allison successfully hand reared an Eastern Bristlebird from egg. This little one was from a very genetically valuable pair and was hand reared to ensure the best chance of survival. Named 'Pip' due to her constant pip vocalisations around feed time, she has won the heart of her keepers. Pip is now thriving in her 'big girl' cage and showing the sass that keepers expect from her. (Pictured below)



Our Lost Valley team (exotics) have used the park closure during COVID to achieve a number of goals including working out how to manage a capybara pond in a way that maintains the water quality (the amount of poo they produce is insane!), developing a rat control program for our 1600m2 walk through aviary that has resulted in the

very near eradication of the rodents from the aviary (a huge achievement!) and a focus on training of a number of the species to facilitate annual health checks. This training includes voluntary injections with our capybaras and crate training for our red pandas and ring-tailed lemurs. Now we just need to work out how to stop the scrub turkeys from stealing our animal food – any ideas are welcome!



*Capybara crate Training*

Our Reptile team have had an incredible year with the first successful breeding of the critically endangered Kroombit Tinkerfrog! Neither eggs or tadpoles of this species have been observed in the wild, despite many efforts to locate them, so very little was known about the breeding biology of this species. In September we had our first tadpole metamorph into a beautiful little froglet. Since then one of our females has laid another clutch of 140 eggs, so the team will be kept busy this season!

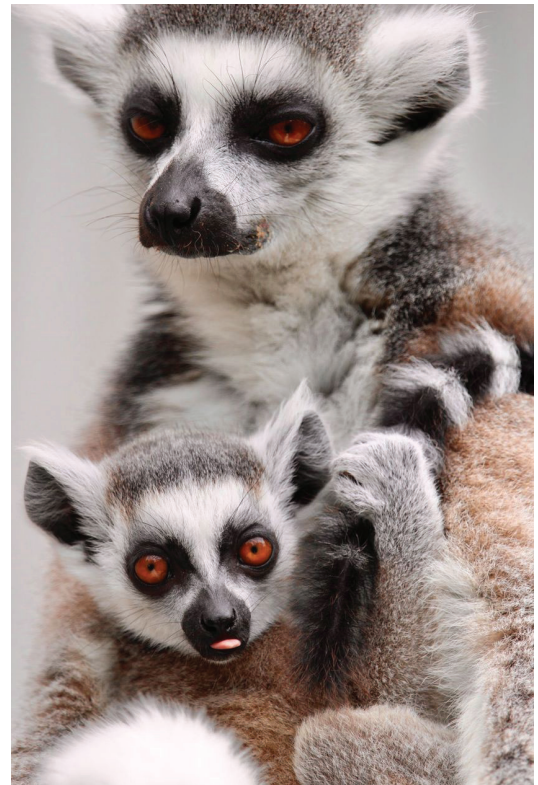


*Michael and Chris working with the Kroombit Tinkerfrog Photo Ed Meyer*

Saskia Lafebre

## HALLS GAP ZOO

We have welcomed a new Ring-tailed lemur into the world. The infant came from the successful introduction of our male, Dodi, and Asha, a 3- year old female who arrived from Mogo Zoo, NSW in March. Asha initially birthed twins on 20th September but unfortunately one passed away after two weeks. The good news is that the surviving little one appears to be doing great and has recently started exploring a lot more (Below).



In August we welcomed another primate to the zoo - this time it was 10 year old Aurora, a female Golden lion tamarin. She has been introduced to one of our resident males, Leon, and they have become a nice pair. Leon has grown in confidence a lot thanks to Aurora's presence and we hope this may lead to breeding success.

An exciting internal move has seen us move our 3.5 metre Burmese python, Doug, into a much larger enclosure than his former one. In turn this freed up his old enclosure for our Green iguana, Shrek. The enclosure was initially designed for Green iguana but a previous attempt to settle Shrek in hadn't gone well due to his sensitive nature. Fortunately with a lot of pre-planning and careful exhibit design Shrek has slipped into life in his new home seamlessly. Both of these individuals are huge favourites with all our keepers and we are delighted it went so well.

We have also welcomed 0.1 Southern hairy nosed wombat from Featherdale Wildlife Park, NSW. It took a while to wait for the borders to open but she is now with us at the zoo.



*Doug the Burmese Python moving to a new larger enclosure*

After two long lockdowns here in Victoria we are glad to be open and operating safely. During these precarious times many have not been able to return to work but some of us have had the privilege of zookeeping through the pandemic. A little routine and normality in a time of the polar opposite. Let's hope we are over the worst of it in the ASZK and look out for our colleagues around the world who are not quite so lucky.

**Dan Kemp**

## HEALESVILLE SANCTUARY

Healesville Sanctuary re-opened to the public with a cap at 1500 per day four weeks ago. During our lockdown we were very busy in sprucing the park up and it is looking quite magical. And of course during lockdown the animals didn't stop breeding and the transfers in and out didn't cease although scaled down a fraction due to the non-availability of flights. This did not impede us and we managed to send "Kofi" our first bred Goodfellow's Tree Kangaroo to Sydney Wildlife, a pair of Bush Thick-knees and a Helmeted Honeyeater to Moonlit Sanctuary, a Long-nosed Potoroo and Black-headed Monitor to National Zoo, North-western Carpet pythons to Darling Downs Zoo, a Yellow-tufted Honeyeater and Sacred Kingfisher to Gorge Wildlife Park, a Sacred Kingfisher to Australia Zoo, a Sacred Kingfisher and Powerful Owl to Featherdale Wildlife Park, Spinifex Hopping-mice to Sydney Zoo, Spinifex Hopping-mice to Maru Wildlife Park, a Tasmanian Devil to Melbourne Zoo and released Orange-bellied parrots at Melaleuca in Tasmania. And incoming we received a group of Star finches from a deceased estate.

Births and hatchings during this period included Rainbow lorikeets, Bush Thick-knees, Diamond Firetails, Eastern Whipbirds, Glossy Ibis, Gouldian finches, Mountain Pygmy-possums, Peaceful doves, Royal spoonbills, Scaly-

breasted lorikeets, Yellow-tufted honeyeaters, Superb parrots and Tawny frogmouths (baby pictured below).



The colour teams at the Sanctuary have now been changed from Covid teams to Life Science teams with enough cross-trained staff that if a team went down with Covid or needed to be isolated, we have enough staff to cover.

The Land of Parrots aviary has been replanned and no longer will be a free feeding of lorikeets and black cockatoos by the public. There were too many health issues occurring so during the lock down all sunflower seed was reduced to one dessert spoon per black cockatoo a training session and the lorikeet feeds removed. Now staff and Visitor Experience Rangers, station the Black cockatoos to allow close-up photos with the birds without them sitting on the public. The birds adapted quickly and the guinea pigs during lock down were non-uniformed staff.

We are looking forward to a busy summer and hopefully nice, but not too hot weather, so we can bring our visitation up to normal numbers.

**Carla Srb**

## ASZK PHOTO COMP 2020 RESULTS

### CONGRATULATIONS TO OUR HIGHLY COMPETITIVE 2020 ASZK PHOTO COMPETITION WINNERS!

Our highly commended photographers are Eliza Stott and Alexia Dalley.

The “Habitat” category was won by Ben Stepkovitch with his photo titled “Dune 45”.

Taking out “Animals in the Wild” is Kelly Hill with “Last Rites”. The winner of “Zoo and Aquarium Animals” AND “People’s choice” is “Tawny” by Nicolle Phillips! Well done Nicolle!

We look forward to some fabulous entries in our 2021 competition. Details to be announced soon.



## • ASZK • MEMBERSHIP STATISTICS

**191** FULL MEMBERS

**0** FULL PARTNERS MEMBERS

**38** ASSOCIATE MEMBERS

**0** ASSOCIATE PARTNERS

**6** RECIPROCAL

**13** CORPORATE

**13** LIFE MEMBERS

**0** OVERSEAS

**2** OVERSEAS CORPORATE

**TOTAL 263**

## • ASZK NEW MEMBERS •

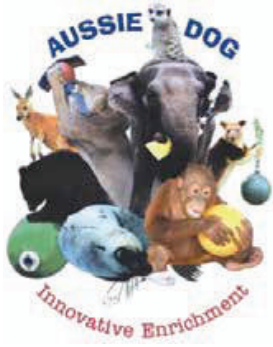
*The ASZK Committee would like to welcome the following new members*

### FULL MEMBERS

|                |                                  |
|----------------|----------------------------------|
| MADISON WATSON | Taronga Training Institute       |
| MARK CARTER    | Alice Springs Desert Park        |
| TIGA CROSS     | Dolphin Marine Conservation Park |

### ASSOCIATE MEMBERS

|                      |
|----------------------|
| TOBY COOPER          |
| ADRIAN SIMPSON       |
| MADELEINE LEWIS      |
| CHRISTABEL MOSCHETTI |
| MADELEINE MURPHY     |



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