CALIFORNIA WILDLIFE CENTER
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Wild Times

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Dedicated to the rescue, rehabilitation and release of Southern California's sick, injured and orphaned wildlife

CWC Performs its First Hawk Blood Transfusion

By Stephany Lewis, DVM, Veterinarian

On the morning of December 30th, CWC received an adult female Red-Tailed Hawk from Newbury Park with evidence of anticoagulant rodenticide toxicosis (rodenticide poisoning). Raptors are exposed to rodenticides by ingesting poisoned rodents, and it leads to an inability to clot their blood, resulting in massive and often fatal blood loss. Our Hawk patient had multiple bruises on her body, was actively bleeding through a tiny puncture wound on her toe, and was severely anemic. We performed a crude test that quickly helps support a diagnosis of anticoagulant rodenticide toxicosis; we pulled a small amount of blood from the bird and placed it in an additive-free tube. Normally, a Hawk's blood should clot within 2-5 minutes in the tube; our patient's blood did not clot until the next day!

Dr. Lewis administering blood transfusion
Photo by Cambria Wells

I decided to attempt a treatment that I had not performed since I was a dog and cat veterinarian; I opted to give this bird a blood transfusion. For a blood donor, we used another systemically healthy adult female Red-Tailed Hawk who had been in our care for about two months, but still had at least a few weeks to go in her rehabilitation process. She was briefly placed under anesthesia, and a unit of blood (which for her size is about 10 mL) was drawn from her jugular vein into a syringe with a special anti-coagulant in it commonly used for blood transfusions. Our donor bird recovered extremely well, and no negative effects from the blood donation were seen.

Hawk 3859 receiving a blood transfusion
Photo by Cambria Wells

Our recipient bird had a catheter placed into her right ulna. For birds, intraosseous catheters (catheters placed into the bone) tend to be more reliable than intravenous catheters since bird veins are very small and fragile, and the medullary cavity (marrow) of most bones (except the "hollow" ones that are continuous with their air sacs) are directly connected with their blood vessels.

The Hawk began to perk up towards the end of her blood transfusion and started to nibble at the line, so we placed a falconry hood to keep her calm and keep her from fussing with her catheter and line. She completed her blood transfusion without any complications and was administered fluids for the rest of the day through her catheter. Her catheter was removed that evening. We also started her immediately on vitamin K, which is an antidote to this type of rodenticide.

The next morning, I received a message from one of our technicians describing this bird as "salty." And indeed she was! She was bright, alert, quite feisty, and significantly less anemic! I had never seen such marked improvement so quickly in a patient suffering from rodenticide. From then on, her recovery was smooth sailing; she was able to live in one of our outdoor flight pens while completing her therapy, and the vitamin K was just hidden in her diet. *(continued on page 2)*

(continued from page 1) The vitamin K is always administered for a full month, until the rodenticides should have cleared the body. Her anemia quickly resolved, and her blood was able to clot normally after discontinuing the vitamin K. After a couple of weeks reconditioning in our largest flight pen, she was successfully released back into the wild!

We were all so happy to have had such a successful outcome for this patient; however, many carnivores suffering from secondary rodenticide toxicosis do not have positive endings. CWC receives between 20 and 40 cases of secondary rodenticide poisoning yearly, and the success rate historically has been less than 10%. Almost all these patients perish in the first 12 hours, which is before our vitamin K therapy is able to take effect and stop their bleeding. In this case, the whole blood transfused not only provides life-saving oxygen and nutrients to their cells, but also replaces some of their clotting factors that have been inactivated by the rodenticide, so they can immediately stop the bleeding that is occurring. This is very helpful while we wait for the vitamin K antidote that we give to take effect, which takes 12-24 hours.

Our hope is that with this treatment, our success rate for patients suffering from these poisons will increase. The only challenge may be finding a readily available donor bird, as bird blood cannot be effectively stored for any significant amount of time. However, birds do not have any naturally occurring antibodies to blood types, so we can safely give a blood transfusion without typing or cross-matching and can even give blood from one completely different bird species to another without risk of a serious transfusion reaction. Though the best thing for our patients is for rodenticides not to be used at all, so they never need a transfusion in the first place! Please use poison-free alternatives for rodent control to protect all of our native carnivores!

Support CWC's treatment of rodenticide-poisoned Hawks. Donate to the Have a Heart for Hawks campaign at cawildlife.org, mail in the enclosed envelope, or call us at (310) 458-9453, ext. 101.

Marine Mammal's Rocky Rescues

By Heather Henderson, Marine Program Manager

The beaches in Malibu that comprise our marine mammal response area are beautiful. Much of their charm comes from the rocky cliffs adjacent to the glimmering Pacific Ocean. Two perfect examples of these rock formations are at Leo Carrillo and Point Dume Beaches. With their proximity to natural Sea Lion colonies (or haul out locations) along with the large number of visitors each day, it's not surprising that our Marine Mammal team is called to these sites often to aid distressed marine animals.

CWC Staff carefully moves towards the Sea Lion pup
Photo by Dayna Anthony

Every response presents unique challenges. Rock and cliff structures exponentially increase the difficulty of rescues. Planning, communication, and executing with safety guiding each decision are key aspects to a successful rescue. One third of our rescues this season have been atop rocky terrain.

The Marine Mammal Rescue Team with a Sea Lion Pup
Photo by Jackie Aramkul

The most challenging response this season occurred at Leo Carrillo State Beach. A young California Sea Lion hauled out during the exceptionally high tide. When the water receded, she was stranded on a cliff 20 feet up, surrounded by rocks covered with sharp mussels on one side and hard wet sand on the other. Our team discussed plans for each aspect of this challenging rescue before moving into position. Two volunteers were positioned below the animal in case she fell from the rock cliff. Two Marine Mammal staff members climbed out on the rock towards the animal, moving slowly to not startle her off the cliff. When the moment was right, a quick grab with the net captured the Sea Lion and she was rescued without injury. Using a careful approach coupled with extensive experience reading Sea Lion behavior resulted in a successful rescue. The patient (Sea Lion #20-003) has responded well to care and has been cleared for release!

Even straight forward rescues can be challenged by the shorter winter days. For safety reasons, we do not perform rescues in the dark. Thus, when the marine mammal team receives late afternoon reports, efficient access and location of the animal can be the difference between offering assistance or waiting until the next morning. We are fortunate that our state and county Lifeguards, along with members of the public are willing to meet us at the beach to aid in timely assistance for the distressed mammal. Rescues in the evening, while complicated by the low light, can lead to some beautiful photos!

The Squirrels are Coming

By Jenn Guess, Senior Wildlife Technician Supervisor

Squirrel kits are fed a special formula
Photo by Cambria Wells

Early Spring is a busy time of year at California Wildlife Center (CWC). This when we see an influx of orphaned Squirrels. If an orphaned Squirrel is a neonate (eyes closed, furless) or infant (eyes open, velvety fur), they are directed to our homecare facility where the Squirrels will receive a significant amount of hands-on care. Very young Squirrels require specific formulas on a schedule of up to six times a day. As the squirrels develop, they will transition formulas and will only need to be fed four times a day. Providing appropriate nutrition at different stages of life is vital in keeping patients from developing metabolic bone disease and other fatal deficits due to poor and inappropriate nutrition.

Squirrel patients receive flowers for enrichment
Photo by Jenn Guess

Once neonate and infant Squirrels reach a certain weight, they are transferred to our facility in Calabasas. In our Orphan Care Unit, the Squirrels will continue to be fed specific formulas on a pre-designated schedule. They are also given small amounts of solid food so they can start to explore eating on their own. Staff closely monitors their weights to make sure that every Squirrel is progressing appropriately. The Squirrels are also provided enrichment. Some examples of enrichment are multiple sticks, branches, and pinecones to chew on, flowers to destroy, and various soft fabrics and hammocks to snuggle into. Eventually, each group of Squirrels receives a squirrel box. A squirrel box is a 1'x1'x1' wooden box with a hatch door that mimics a nest.

At CWC, young Squirrels are placed into groups of about six individuals, and these groups will stay together as a family unit through their release. Once the unit is set, a group will not accept a new member. The family unit grows up in our Orphan Care Unit together and eventually moves into an outdoor enclosure. Outside, the groups of Squirrels continue to gain weight, get acclimated to the weather, and become more independent. After two weeks in our outdoor enclosures, a group is ready to be soft released, meaning the patients are provided shelter (their squirrel box), food, and water for three days at their new location. The Squirrels are then able to venture out on their own when they feel comfortable. Eventually, all of the Squirrels in the group will start to find their own food/water and build nests.

Not all baby Squirrels that are found need to be brought to CWC. Sometimes a Squirrel nest is compromised due to a predator attack, heavy winds, rain, or various other reasons. When a nest is damaged, it is not uncommon for baby Squirrels to fall to the ground. The mother Squirrel will often fix the nest before coming down to retrieve her babies. It is also possible that an adult Squirrel will have multiple nests. The mother might decide to check on an alternate nest and then take her young to the secondary location.

If you find a baby Squirrel on the ground and they do not have any obvious injuries, place them in a one foot deep box with a soft towel and attach the box four feet off the ground to a nearby tree trunk. Make sure the box is not in direct sunlight. Heat some uncooked rice in the microwave until warm and place in a sock to create a makeshift heat source. Place the heat source on one side of the box so the Squirrel can choose to move towards or away from the heat. Leave the box for four hours to give the mother Squirrel time to retrieve her young. If the mother does not come back, contact CWC. If you find a baby Squirrel in the evening, bring it inside and keep it in a warm, quiet, dark location overnight and then try to re-nest the Squirrel first thing in the morning. At no point should you try to feed or give water to a baby Squirrel. If you find a baby Squirrel with an injury, contact CWC immediately at (310) 458-9453.

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Clever Crows

By Cori Carlson, Administrative Assistant

Crows may not be the most popular of our native wildlife. But the black bird made famous in folklore and song lyrics is one of the most intelligent and an amazing problem-solver.

American Crow
Photo by Johanna Molina

CWC admits up to 175 species of birds each year, including American Crows. While CWC takes in adult Crows throughout the year, we start seeing babies in our Orphan Care Unit (OCU) in early May. Babies come to CWC when something happens to their parents, or they are injured. Last year, OCU cared for 66 baby Crows.

While Crows are in care at CWC, we provide them with enrichment activities to keep them active and help them develop skills they'll use back in the wild. While the younger Crows are inside a building, the staff put flowers in their cages and hang colorful, shiny materials with bells to encourage them to explore. When they are self-feeding and ready to move to larger outdoor enclosures, the staff have used dog-training toys with levers, slide doors, and slots for the Crows to open and find treats. CWC staff and volunteers also make homemade enrichment boxes, which they fill with shredded paper and hide treats for the Crows to find.

American Crows live across North America. While they prefer open spaces such as farmland and grasslands with trees nearby, they also live in suburban areas. Most types of Crows live in groups, called murders – a name that may not help with their popularity.

Crows are part of the Corvid family, which also includes Ravens and Jays. Since Crows and Ravens look similar, people sometimes confuse the two. Ravens are larger, have bigger beaks with a curve at the tip, their tails are wedge-shaped, and their wings come to a point. Meanwhile, a Crow's tail feathers are the same length and look more like a fan when the bird's in flight.

Typically, young Crows will be ready to leave the nest at four weeks of age, but they will continue to rely on their parents to feed them until they are about two months old. Crows are omnivores, which means they eat both plants and animals. Their diet in the wild includes grains, seeds, nuts, berries, fruit, insects, worms, and mice. Crows will also eat fish, eggs, and nestlings of other bird species.

When Crows come to CWC as orphans, they start with the corvid nestling diet, which is a blended mash of high-quality ground puppy food, hard-boiled eggs, bananas, baby food, vitamins, and minerals. As they get older, they transition to a Crow diet, which consists of bite-size pieces of high-quality dog food, hard-boiled eggs, fruits, vegetables, meat protein, vitamins, and minerals.

To give the Crows the best chance of making a successful transition back into the wild, CWC starts releasing them in groups of 9-15 birds beginning in August. This is the end of baby season when the Crows in the wild are less territorial. They start to join together in larger groups for the winter, known as communal roosting.