

CCWR News

Mission Statement

The California Council for Wildlife Rehabilitators is dedicated to advancing wildlife rehabilitation and supporting wildlife in a changing world.

Fall 2016

CCWR INVITES YOU TO JOIN US AT OUR 22ND ANNUAL SYMPOSIUM—OCTOBER 22 - 24, 2016

Join us Saturday, October 22nd through Monday October 24th for a weekend packed with lectures and labs to enrich your wildlife rehabilitation work. The DoubleTree by Hilton is located directly across the street from the Fresno Convention and Entertainment Center.

Symposium registration is available online (ccwr.org) through October 7. No cancellation refunds after October 7.

All guest rooms and suites offer complimentary Wi-Fi, a 37-inch flat-screen HDTV, an iPod Dock Alarm Clock, a Serta Suite Dreams bed and a refrigerator. Microwaves are available to rent at \$10.00 per day. There is a microwave available 24 hours in the common area outside of the Java Stop.



**DoubleTree by Hilton
Fresno Convention Center**
Reserve your room before October 7

Breakfast, lunch and dinner are available in the on-site restaurant. The Java Stop at the hotel features Starbucks coffee and packaged breakfast items to go. The Room Service menu is available 6am-10pm. There

are no other convenient locations near the hotel to eat. All convention hotels disallow outside food or alcohol in their common areas or meeting rooms. This hotel specified in our contract penalties for first and second violations observed with the third violation resulting in the group being locked out of the meeting rooms. Please keep this in mind and consume any outside food or drink in your rooms. All of the CCWR food and alcohol events are provided by the hotel.

Attendees are encouraged to attend the free Pizza and Salad Dinner on-site sponsored by CCWR on Saturday night and purchase the buffet dinner on Sunday night (check the appropriate boxes on your registration form). Please purchase your buffet dinner tickets with registration. No buffet tickets will be sold at the CCWR registration check-in at the hotel. Sunday night's buffet will feature omnivore, vegetarian and vegan selections. Or you can bring your own meals and store them in your room's refrigerator.

Guests staying at the hotel will be presented with a warm signature chocolate chip cookie at check-in and each subsequent night before you retire to your room. The hotel is offering symposium attendees a group rate of \$139.00 per night, plus



taxes and fees. DoubleTree will also be providing two breakfast tickets redeemable in their restaurant. A ticket will be in each registration packet. Hotel parking is free. Unfortunately, the DoubleTree does not allow pets.

Register at the DoubleTree hotel through the CCWR website at: <http://tinyurl.com/ccwr2016hotel> or you may call the hotel directly at 1-559-268-1000. *Continued on page 3*

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YOUR BOARD ACTIVITY

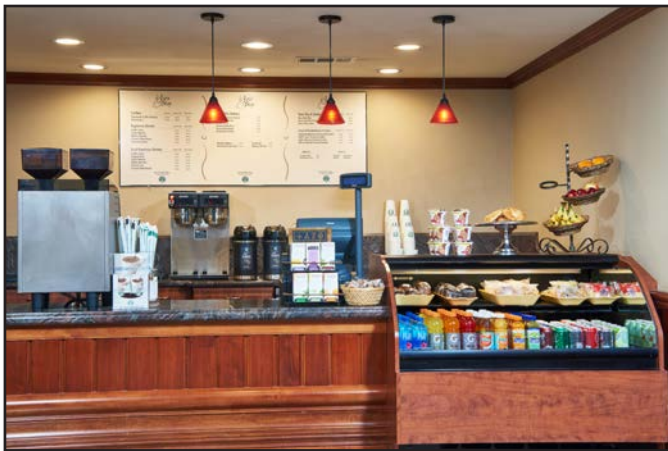
You will soon be receiving via email your ballots for the upcoming Board elections.

We encourage our current CCWR committee members who have served for at least a year will consider expanding their roles by applying to become board members. Our by-laws allow us to have up to 15 Directors on the Board. If you've served on your committee for at least a year, consider applying to become a Board Member (kathy@ccwr.org).

Any member is welcome to attend the board meetings. Please advise CCWR President Vann Masvidal at least two weeks prior to the meeting (vann@ccwr.org). Members who wish to present a topic must understand that speaking time will be limited as the meeting agenda is typically full of items to be discussed. Also the board may call an executive session or vote during the meeting and all regular members will need to temporarily step out of the room.🔗

**Next Board Meeting
Friday, October 21
DoubleTree by Hilton, Fresno**

SYMPOSIUM HOTEL PHOTOS



Java Stop



Atrium



Ballroom



Indoor/Outdoor Pool

22ND ANNUAL CCWR SYMPOSIUM CONTINUED

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This year, each morning before classes start, different exercise sessions will be offered; Zumba, Yoga and Tai Chi to shake out the cobwebs and energize our day. Dr. John Dussich will be the first presenter on Saturday discussing “Compassion Fatigue.” Other presentations include January Bill and Marie Travers lecturing on “Zen and the Art of Aquatic Bird Rehabilitation”, Tom & Cheryl Millham speaking on “Foxes, Coyotes and Bobcat Care”, Virginia Morell on “Animal Wise: Why Individual Animals Matter”, Dr. Shannon Riggs will cover “Western Avian Medicine”, Therese Bush speaks on “Successful Homeopathic Cases with Wildlife” and Nicole Carion will present the CA Department of Fish & Wildlife Update on Sunday morning. For a full list of symposium topics, times and registration forms go to: <https://ccwr.org/symposium/>

Five labs and two workshops will be offered at an additional charge of \$15.00 each for labs and the Falconry workshop by Elaine Friedman and Kathy Bolen, and \$20.00 for the full-day Wildlife Search & Rescue workshop by Rebecca Dmytryk. Rebecca’s workshop may be purchased and attended without registering for or attending the CCWR symposium. All other lab and workshop attendees must be registered for the symposium to purchase a lab or workshop. Each lab will have a pre-requisite lecture that will be open to all symposium attendees. Please check the schedule and note the lecture times for your labs. Labs fill up quickly, so please make your selections soon. Mail-in registrations must be received by October 7. Online registrations are accepted until October 7. Whether you are attending one class or all days, you must pay full symposium price.

Remember, Family Memberships can register a total of two people at the CCWR membership price. Organizational

Memberships can register a total of two people in their organization at the membership price. Any additional registrations that are not Family or Organization memberships on their own must register at Non-Membership cost. Individual membership covers one registration at member cost.

On-site registration will be available from 6:00 - 9:00 pm Friday and 7:00 - 9:00 am on Saturday. After registration closes at 9:00 a.m. on Saturday, pre-paid registration packets can be picked up at the CCWR sales table in the Marketplace, Salon A1. Walk-in registrations will be accepted until registration closes at 9:00 a.m. Saturday or it is determined the lectures have reached capacity.

Also on Friday there will be informational vendors in the lobby, including Pacific Gas & Electric (PG&E) who will have their lift truck in the parking lot. PG&E’s Senior Terrestrial Biologist will be on hand to answer questions.

The Annual General Membership Meeting will be held at 9:00 a.m. on Saturday during the general session.

Saturday night is Pizza & Salad night in Salon C, sponsored by CCWR. After pizza there will be a DJ and dancing. This event is open to all attendees, their families and friends and is FREE! It is very important that you note on your registration form how many will be attending the Pizza and Salad so enough food will be ordered for all. We will need a head count by Monday, October 17. Anyone that needs to update their pizza attendance head count, please email us at info@ccwr.org.

Sunday night’s events are open to family and friends. The buffet dinner in Salon C is from 6:30 p.m. – 7:40 p.m. to all who hold pre-purchased tickets. After dinner, Whitney Albright, Climate Change

Coordinator for the CDFW, will speak on “Climate Change and California’s Native Wildlife” followed by the Silent Auction and Raffle from 8:30 pm – 10:00 pm.

Shopping at the 14 vendors in the CCWR Marketplace will be in Salon A1 from 9:00 am to 5:00 pm on Saturday, 8:30 am to 5:00 pm Sunday and 8:30 am to 12:00 pm on Monday. There will be a special vendor exhibiting Kenya, Africa Maasai jewelry presented by Rachel Avilla, benefiting the Maasai women directly.

Don’t forget to pre-order the new CCWR logo T-shirts on your registration forms so they will be available for you at check-in.



Our host group this year is Critter Creek Wildlife Station.

The symposium is approved by the CDFW for 24 hours of continuing education. Certificates will be issued during the symposium. 🍪



Don't forget your cookie!

NICOLES' CORNER Mange, the Public, and Rehabilitation

By Nicole Carion



You may be receiving calls from the public who are seeing wildlife in their area with mange. This article is to help you with those calls and provide you with important information. Most of you have heard of mange, but did you know that mange is caused by a microscopic mite and there are many mite species? These mites burrow into the skin of animals and cause a wide variety of skin problems, most notably, hair loss. Some species of mites burrow directly into the skin while others burrow into the hair follicle. Both create tunnels where they remain feeding and reproducing, likely eating skin cells, lymph fluids and possibly blood! Have you started itching yet?

There are different types of mites responsible for different types of mange and they tend to be specific to the species they infest. *Sarcoptes scabiei* var. *canis* (also called canine scabies) is typically associated with red foxes, coyotes, raccoons, badgers and gray wolves. *Notoedres cati* is commonly found on bobcats and mountain lions. The majority of calls coming into the department are regarding coyotes with sarcoptic mange, but we have recently started to receive reports about sarcoptic mange in kit foxes. Other wildlife being reported as “mangy” have been bobcats, squirrels, eagles (yes, eagles!), and bears – again, each with their own special type of mite.

Mange can be visually disturbing to the public and devastating to an animal. Did you know that the fable of the “chupacabra” was actually a coyote suffering from mange in Mexico? Members of the public are desperate to find help for the animal and ask if there is any way to intervene.

The first step in helping members of the public and the animal is educating the humans. Many times people will feel sorry for the animal and begin feeding it. We

all know that this can lead to an entirely different, potentially fatal condition called, “habituation”. The other question frequently asked is if they can “medicate the animal” through “free-feeding”. We all know the potential for non-target animals to eat the medication. This can be a “big” problem, possibly leading to the death of another unsuspecting animal. Neither of the above actions is advisable.

The following information is general information for everyone involved and disseminating this information to the public is the most helpful action you can take:

- Mange is spread through direct contact with another infected animal or by inhabiting a shelter or den where a previously infected animal lived. While mites can live free of a host for a few days to weeks, the chance of environmental infection is rare and greatly dependent upon the mite species and its life stage and other environmental factors. In general, the mite is most likely not able to survive more than 36 hours without a host, but in places such as a coyote or fox den, the den can possibly harbor the mites for a while. The above information is important because it will let the public know that the chance of them, their children or their pets becoming infected is small, but it is important not to draw wildlife in close to dwellings or humans by feeding or leaving trash or pet food out in an irresponsible manner.
- It is often difficult to treat wild animals with mange because of their nature. The first hurdle to overcome, is “obtaining” them. Most wild animals, especially coyotes and bobcats, are **extremely** difficult to trap and are simply not obtainable. Some have been caught but not without an extensive knowledge of the specific animals patterns and trapping expertise (NOTE- your rehabilitation permit is not a trapping permit). If a person does manage to catch and bring you a mange case, most likely the animal is going to be near death.
- Currently, 2-3 doses of medication

administered over 2-3 months is required to completely rid an animal of a mite infestation. Spending an extended amount of time in captivity, for an adult wild animal, can be incredibly stressful. In most cases, the animal will have other medical issues that have to be addressed in addition to the mange (starvation and bacterial skin infection are very common). If the animal is already weakened due to some other problem, the mites can directly interfere with immune function by damaging the skin and making the animal susceptible to other disease. The continued loss of hair and the inability to maintain a healthy weight and body temperature can also be fatal over time. Quarantine from other animals is a **must** and can be challenging at small centers with multiple species of animals coming in and out. Cleaning bowls, enclosures, and bedding has to be done daily in order not to re-infect a patient along with extensive biosecurity when going from a mange patient to other patients and your home.

- Canine scabies has infected humans but healthy individuals usually don't have a long lived infection because we are not the intended host. If a human host does obtain mites, the burrowing action can cause an allergic reaction leading to a rash mimicking a number of mosquito bites.

So, after you have disseminated pertinent information to the public regarding mange, what else can be done? For those facilities who do have the quarantine space for extended periods of time, mange cases can be handled based on your facilities own ability and desire to care for these animals. Thank you to all these facilities that are working with mange cases and sharing your experience and knowledge with the California Department of Fish & Wildlife (CDFW) and other facilities.

Please contact me (Nicole Carion) if you are a facility that is handling mange cases and I may not be aware of it. I would like to keep a current list of facilities that are treating mange cases for my own knowledge

and to be able to help direct cases to willing facilities.

I will not be advising you on specific doses and medications in this article. You will need to work with your veterinarian of record (or I will put you in touch with our department veterinarians) based on the size of the animal and the species. Be advised, some treatments effective on one species can be deadly to others. This is definitely not a “one treatment fits all” situation.

The most common scenario you may face is... the mangy animal is running around the community being seen on occasion but is still energetic enough to be “surviving”.

If the animal is still able to hunt and care for itself, the animal should be left alone. We have had reports of mangy animals looking better over time, and this would be the best outcome possible. This scenario may be “mother nature” at work and the amazing immune systems of wild animals learning how to cope with mange. Unfortunately, some animals may not be that lucky and will succumb to mange (and the side effects of having mange). In the unlikely event the mange animal is frequently visible, losing its fear of people and being fed by people; please report these situations to CDFW. Now we potentially have a “public safety” issue and intervention by the CDFW may be warranted. You can either report the cases to me or better yet, you can call your local regional office (report it to either the law enforcement division or the local CDFW biologist).

In rare cases, we may work with outside entities to try to capture the animal and find a facility willing to treat it, but please do not try to orchestrate the trapping of these animals without the permission of regional CDFW employees.

If the caller is merely reporting a mange situation, take down the general information

and send me an email if you have time (this is not mandatory). CDFW would like to hear about mange cases in your area so we have an idea of the propensity of mange occurring statewide and what types of animals mange is affecting. You may ask that a person monitor the animal and keep you updated. This will help in situations where the animal’s condition worsens over time and patterns become necessary to try and determine if catching the animal is feasible. The carcasses of certain species could be desirable as well.

You may have heard about the bobcat/notoedric mange study in the Santa Monica Mountains. A large number of bobcats in that area have suffered and died due to notoedric mange. Currently, further research is being conducted by the department and the UC Davis Wildlife Health Center to further understand sarcoptic mange and the effects on canids in the state. If you obtain a fresh carcass of a coyote or fox with mange, the department may want the carcass depending on the area and situation. Please contact me to assess if CDFW wishes to collect the carcass. It is also necessary to mention while treatment may completely cure an animal, it may become infected again when it is released. Facilities who are treating mange cases may expend an extraordinary amount of time and effort into an animal just to find out it was re-infected after release. This is a very depressing scenario that has occurred, unfortunately. These are things to keep in mind as a rehabilitator.

Finally, another key piece of information to know and impart is that although mange seems to be on an uptick here in California, in other places in the world where epizootic levels of mange have occurred self-sustaining populations suffered short term mortality, but it did not seem to affect long term population dynamics. It should be noted mange is more apparent where there are a high density of animals (coyotes living in urban areas). The most concerning

situation occurs when mange strikes in fragmented populations or in threatened or endangered species. In California, there is a very worrisome situation occurring with mange and San Joaquin kit foxes. If you received a kit fox with mange or a carcass please contact me.

In conclusion, if you receive a call about a wild animal with mange, obtain pertinent information (species, location, date, etc.) and provide as much information and education as possible to the caller. If you are a facility comfortable caring for these cases or you know another facility taking these cases, rehabilitation is an option. If you are not comfortable caring for mange cases or simply don’t have the capacity, let the public know that mange is occurring at a higher frequency in the state and stable populations of animals will hopefully develop immunities over time. The key message should be not to feed the animal or try to medicate by free-feeding. You can explain that research is occurring to try to better understand the effects on wildlife. You can let them know that you will provide the information to the department so that we can maintain records of the event. Unfortunately, there will be many animals that succumb and there is no possible way to respond to them all.

A big thank you for all of you who have helped with mange cases either through providing the carcass for research, treated mange cases, reported mange cases or simply educating the public regarding mange. “It takes a village” as the old adage states, we are all traveling uncharted waters when it comes to California wildlife and mange. Please contact me if you have any further questions or have pertinent information you would like to share. 🐾

Nicole Carion, Statewide Coordinator for Wildlife Rehabilitation, California Department of Fish and Wildlife
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CONSIDERING HOMEOPATHY WITH WILDLIFE

By Shirley J. Casey, ©2016

Since a Harvard University study in 1990 showed that alternative health care has become increasingly popular for humans and the domestic animals in their care, the use has expanded. Wildlife rehabilitators and veterinarians also have considered and used complementary and integrative medicine (CIM) with some wildlife conditions, including botanical medicine, natural health products and methods (e.g., honey on wounds), nutritional support, acupuncture and homeopathy. While homeopathy is the second most commonly used health care modality and used by 200+ million people, it is still less familiar in North America. Homeopathy is used so frequently in Europe that it is now part of common practice and no longer considered in the 'alternative' category. Some rehabilitators and veterinarians have been using it with wildlife cases for 20+ years in North America – in conjunction with good rehabilitation practices and veterinary support.

WHAT ARE SOME OF THE REASONS THAT REHABILITATORS CONSIDER HOMEOPATHY?

Concern about side effects of some pharmaceutical medications. Info sheets on pharmaceuticals show that many commonly used medications have an extensive list of side effects for humans. The side effects for use with animals may be long as well (e.g., appetite loss, anxiety, lethargy, diarrhea), sometimes serious – and often more difficult to identify (e.g., nausea, abdominal pain, dizziness). Rehabilitators and veterinarians may use some medications even with side effects, but seek ways to help the animal and minimize problems.

Concern about potential long term consequences of some pharmaceutical medications, including antibiotic

resistance. Many drugs are relatively new – with little knowledge of the long term effects on people or animals. Concerns about antibiotic resistance are high and growing by health professionals, groups such as World Health Organization, and individuals. The possibility of being able to support and accelerate the animal's recovery by using safe and effective treatments other than antibiotics has growing interest.

Some conventional medications are not appropriate, safe or approved for wildlife in general, or for specific types of animals. Some conventional medications may achieve desired results, while others may not for variety of reasons. Determining and calculating appropriate dosages can offer challenges especially for tiny and very young animals, or those with very different metabolisms than species on which the medications were developed and tested.

Administering conventional medication and treatments, especially for multiple days, increases handling and stress on animal and chances of mistakes in doses, etc. This further raises the risk of injuries to the animal and handler. It also requires more time from caregivers. Administering homeopathic remedies is easier and less frequent.

High cost of some medications and treatments. Some conventional medications are expensive – and may expire in a short period. Plus, initial tests can be expensive, invasive, delay treatment and results may be unclear as to possible causes.

Desire to help wild animals recover with a minimum of medications and treatment. Rehabilitators certainly want to support the animal's recovery and release, as well as consider options that may help decrease side effects and long term problems.

Homeopathic medicines have been used safely with a wide range of physical, emotional and mental conditions for over 200 years.

That does not suggest excluding the use of other medical care or that homeopathic medicine treats all conditions. Rather, homeopathy can be considered as one more possible tool to complement other treatments to support health.

Heard from other rehabilitators that they have found homeopathy to be safe, effective with variety of conditions, easy to administer and return animals to the wild faster...when used as a complementary tool along with good rehabilitation practice and veterinary support.

WHAT IS HOMEOPATHY?

Homeopathic medicine is a system that treats symptoms, imbalances and disease by giving micro doses of a substance to serve as a catalyst in stimulating the body's own healing mechanisms. The way that a homeopathic medicine is chosen is by matching the symptoms of the patient with a medicine that, when given to a healthy individual, would produce similar symptoms to those the homeopath is seeking to cure in the patient. This idea of using similars, or "like cures like", has been discussed in medicine since the ancient Greeks, the Chinese, the Egyptians and the Native Americans. In the late 1790's, Dr. Samuel Hahnemann formally developed a systematic approach to applying this concept of similars.

Dr. Hahnemann demonstrated that administering tiny doses of a substance to a healthy person could identify the substance's "remedy picture" (i.e., the signs and symptoms that it could produce). Administering the same medicine to a person with those symptoms matching the remedy picture could thus stimulate his or her defenses and help the body to heal itself. Conventional medicine uses somewhat similar thinking in the treatment of allergies and in the use of vaccines.

PRINCIPLES AND PROCEDURES

Dr. Hahnemann and other homeopaths defined several fundamental principles of classical homeopathy. One of the key principles is that of Vital Force, the naturally occurring life force in all living beings that constantly strives for health. Another principle states that the whole being must be considered in healing. This means that physical, mental and emotional states must all be considered, not just the physical symptoms (for rehabilitators this means considering the animal's emotional state, e.g., fear or anxiety). Some of the other fundamental principles of classical homeopathy include the minimum dose, use of a single medicine, and the meaning and importance of symptoms.

Dr. Hahnemann also developed a very strict method of preparing homeopathic medicines, also called homeopathic remedies. Single substances (plant, animal, and mineral) are placed in a solvent such as water or alcohol and diluted to extremely small microdilutions to reduce any toxicity. The homeopathic medicines are then succussed (shaken) to increase the effectiveness of the final medicine. These principles and processes have been well described in the homeopathic literature and deserve far more attention than the space available in this article.

SCIENTIFIC FOUNDATION FOR HOMEOPATHY

While some of the principles of homeopathy have not been well understood, advances in quantum physics research help explain many of the principles. Research continues at a rapid rate and new information is being published frequently in respected publications such as the *New England Journal of Medicine* and the *British Medical Journal*.

Homeopathy is no different from other fields of science, with both believers and critics. Some critics denounce

the notion of a Vital Force, the use of ultramolecular dilutions and the concept of potentization of remedies. Others in the allopathic medical community decry lack of scientific basis. Interestingly, one of the fundamental tenets of the scientific approach is application of a precise, regimented and repeatable set of procedures. The very precise homeopathic approach described by Dr. Hahnemann involving the Law of Similars, detailed case-taking, single medicine, and the minimum dose has not changed in 200+ years. Many of these same critics, however, readily accept certain "givens" in physics, such as inertia, gravity, magnetism, etc. However, since no explanation exists for these physical "Laws", they must also then be accepted because they are repeatable, observable phenomena.

Similarly, homeopaths consider some aspects of homeopathy to be "givens", because they have been seen to work successfully and repeatedly – similar to physicists being able to describe why gravity 'works.' Most homeopaths seem to embrace homeopathy for what it can do, and do not seem to be too concerned about the scientific nuances of its workings. As research in quantum physics continues, hopefully the scientific basis will become more clear and accepted.

Until then, there are a variety of publications that discuss the scientific basis for homeopathy and describe research, such as *Homeopathy: Science or Myth* (Gray); *Homoeopathic Science and Modern Medicine* (Coulter), *Homeopathy A Frontier in Medical Science* (Bellavite and Signorini); and *Healing with Homeopathy: The Complete Guide* (Jacobs and Jonas).

EXPERIENCE WITH WILDLIFE

Numerous wildlife rehabilitators have been using homeopathy with wildlife since the early 1990's with thousands of cases. It has been used with a wide range of species

including raptors, hummingbirds, robins, rabbits, squirrels, fox, deer, otters, turtles, lizards, and more. It has been used to treat a myriad of diverse conditions including fear, grief, head trauma, wounds, fractures, abscesses, pneumonia, and viruses such as West Nile.

In many cases, the results of using homeopathy with wildlife have seemed extremely positive. Recovery and release seems faster than in similar cases that had not received homeopathic treatment, particularly with trauma. Homeopathy has been able to treat some conditions that allopathic medications have had difficulty treating (i.e., grief and fear). The rehabilitators using acute care homeopathy have reported that the remedies were easy to administer and the application of a single or minimum dose seemed to be highly effective. Their use of antibiotics, corticosteroids and prescription pain medications decreased, without apparent negative consequences. Their overall cost of medicines decreased, as did costs of keeping animals in rehabilitation since some animals were released faster resulting in reduced costs of food and caging. Some rehabilitators found that their release rates had improved since using homeopathy.

In other situations, rehabilitators have reported that their results have been inconsistent, with some animals recovering quickly, and others showing no improvement. In yet other situations, rehabilitators have said that the homeopathic remedies did not appear to work at all.

Discussions with rehabilitators have revealed a variety of reasons for the inconsistent results with wildlife. In some situations, the animal's condition was beyond improvement and it is unlikely that help or recovery would have been possible. *(Continued on page 8)*

CONSIDERING HOMEOPATHY WITH WILDLIFE CONTINUED

Continued from page 7

In some cases other conditions (such as diet, husbandry, caging, etc.) were contributing factors.

In other cases, the person using homeopathy with wildlife did not have enough knowledge and/or skill in applying the principles and using effective procedures, including case-taking (i.e., observation, diagnostics, knowing what is normal for the species), repertorizing the symptoms (i.e., looking up the remedies that are specific for a symptom), using a complete materia medica, selecting an appropriate medicine and potency, knowing if and when to repeat or change remedies, and other significant steps. Some people said that they did not have the time to study it or 'take or monitor individuals cases to the extent needed' – especially with high volumes of cases.

While some people worked with homeopathic veterinarians and professional resources, others based decisions on limited information from the popular press or on the internet. Some thought homeopathy would be a quick and easy thing to do, but it wasn't. Some felt they could use homeopathy alone, only to find that they still needed to suture wounds, splint fractures, treat for parasites and more. All of these factors can affect results. The results can be improved upon if these factors change (i.e., by the increased understanding of homeopathy and its application).

ONE MORE TOOL TO CONSIDER

Rehabilitators evaluate different ways to improve their rehabilitation practices, whether in caging, diets and feeding, handling, health care, and more. As there is increased discussion about homeopathic medicine as a viable complementary treatment for wildlife, it is worthwhile for rehabilitators to learn more so that they can better understand the modality, cases in which it might and might not be

a possible option, and what is required for it to be used responsibly and effectively. While most homeopathic remedies are available 'over the counter' with highly simplified labeling, their most effective use requires knowledge, skill, resources and time. Like other aspects of wildlife rehabilitation, homeopathic medicine is a serious endeavor and needs to be used carefully and well. Papers specifically on homeopathy with wildlife and case results are available at <http://www.ewildagain.org/Homeopathy/homeopathy.htm>.

RESOURCES

- Blackmer, R., S. Casey and A. Casey. Beyond Conventional Allopathic Medicine: Options Considered by Wildlife Rehabilitators. <http://www.ewildagain.org/Homeopathy/beyconvent.htm>
- Blackmer, R., J. Facinelli, S. Casey and A. Casey. Exploring the Concept of the Minimum Dose: Wildlife Rehabilitators Consider Homeopathy. <http://www.ewildagain.org/Homeopathy/mindose.htm>
- Facinelli, J., S. Casey and A. Casey. Finding and Using Holistic Veterinary Services for Wildlife. <http://www.ewildagain.org/Homeopathy/findvet.htm>
- Casey, S. and Betty Jo Black. Homeopathic First Aid Tips for Wildlife. <http://www.ewildagain.org/Homeopathy/homeopathictips.htm>

AUTHOR

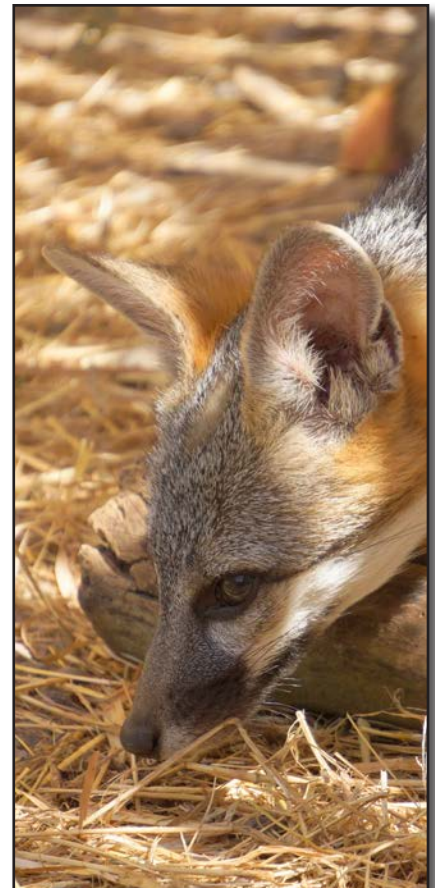
Shirley Casey, a licensed wildlife rehabilitator since 1986, is co-founder of WildAgain Wildlife Rehabilitation in Colorado (www.ewildagain.org). She has conducted research, published and presented on a wide range of wildlife related topics around the country since 1995, including nutrition, caging, health and regulations. She collaborated with holistic veterinarians on issues related to the use of homeopathy with wildlife as well as presented and published on homeopathy for rehabilitators and veterinarians since 1992. 🐾

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SESSIONS ON HOMEOPATHY WITH WILDLIFE OFFERED AT CCWR SYMPOSIUM 2016

The first hour provides a short overview of homeopathy and some wildlife cases. The second hour suggests resources to help rehabilitators learn more. The presenter, Therese Bush, has been studying and using homeopathy since 1997 and supervised a rehab center for several years. View the schedule and register at:

<https://ccwr.org/symposium/>



Grey fox

CA STATE FISH & GAME COMMISSION UPDATE

On May 9, 2016, the Commission hired a new Executive Director; Valerie Termini.

The 40 year-old Ms. Termini of Davis becomes the first female Director in the Commissions' over 100 year history. She replaces Sonke Mastrup and will not vote on commission issues but will lead the research that is offered to commissioners to make their decisions. She has stated her only agenda is to provide solid information to the panel and continue along the "same lines" as her predecessor.

Termini joined the Ocean Protection Council staff in 2007. She holds a master's degree in international environmental policy from the Middlebury Institute of International Studies at Monterey, and once served as a Peace Corps volunteer in the West African nation of Togo.

Tom Raftican, president of the Sportfishing Conservancy, commended Termini's qualifications but said she didn't have Mastrup's record of hunting and fishing advocacy.

NEW APPOINTEES

Additionally in May, Governor Edmund G. Brown Jr. announced the following appointments to the Commission:

Russell Burns, 55, of Napa. Burns has been business manager at Operating Engineers Local Union 3 since 2006, where he has held several positions since 1994, including treasurer, financial secretary, district representative, special representative to the business manager and business agent. This position requires Senate confirmation and the compensation is \$100 per diem. Burns is a Democrat.

Peter Silva, 63, of Chula Vista. Silva has been president and chief executive officer

at Silva-Silva International since 2011. He served as assistant administrator for water at the U.S. Environmental Protection Agency from 2009 to 2011, senior policy advisor at the Metropolitan Water District of Southern California from 2005 to 2009 and vice chair at the State Water Resources Control Board from 2000 to 2005. Silva was deputy general manager at the Border Environment Cooperation Commission from 1997 to 2000 and served in several

positions at the City of San Diego Public Utilities Department from 1987 to 1997, including deputy director for water utilities, assistant deputy director for the clean water program and civil engineer. He was a resident engineer at the International Boundary and Water Commission from 1983 to 1987. Silva was an engineer at the San Diego Regional Water Quality Control Board from 1982 to 1983, at the Otay Water District from 1980 to 1982 and at the Los Angeles Regional Water Quality Control Board from 1977 to 1980. This position requires Senate confirmation and the compensation is \$100 per diem. Silva is a Democrat.

The Fish & Game Commission is currently advertising for the position of Deputy Director. All applications were submitted at the end of August for review.

The prior two appointments—Huntington Beach (Orange County) lawyer Anthony Williams and vineyard owner Eric Sklar of St. Helena, Napa County—are viewed as being more conservation-minded than hunting-oriented.

Over the past few years, the sport community has come out on the losing end of several decisions, including bans on bobcat hunting and lead bullets. In the future, the commission is likely to play a role in such issues as managing growing populations of wolves, coyotes

and mountain lions, as well as overseeing dwindling numbers of salmon and marine mammals.

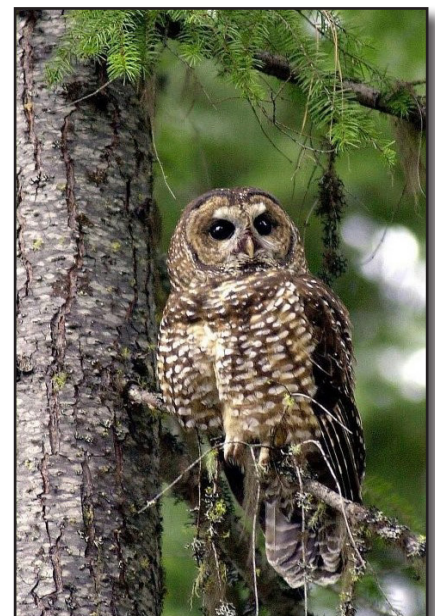
Environmental groups have praised the recent opinions of the commission, noting the growing pressures of development, climate change and drought on wildlife and stressing the need for greater protections. Many believe hunters and fishers, whose numbers have been in steady decline for decades, have wielded far too much power.

Upcoming Fish & Game Commission meetings and agendas can be viewed at: <http://www.fgc.ca.gov/meetings/2016/>

To watch the meetings via live streaming, go to: www.Cal-Span.org 

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*Northern Spotted Owl.
FGC is currently considering adding this owl to the endangered species list.*

SOLAR ENERGY - AT WHAT COST?



*Aerial view Ivanpah Solar Power Facility
Photo: Marcus Cyron*

The Ivanpah solar thermal power plant in the Southern California Mojave desert at the Nevada border supplies enough carbon-free electricity to power 140,000 homes. For birds, bats and butterflies, though, the futuristic project is the Death Star, incinerating anything that flies through a “solar flux” field that generates temperatures of 800 degree Fahrenheit when 300,000 mirrors focus the sun on water-filled boilers that sit atop three 459-foot towers. Birds that fly into the solar flux ignite in mid-air and are classified as “streamers” by the plant employees who watch their burning carcasses fall to earth.

The scientists and members of the federal Fish and Wildlife Service’s Office of Law Enforcement (OLE) saw first-hand those trade-offs when they visited Ivanpah, where mirrors called heliostats heat water to generate steam to drive an electricity-generating turbine. The intense light that surrounds the top of Ivanpah’s power towers attracts insects, including Monarch butterflies. Federal officials “observed large numbers of insect carcasses throughout the Ivanpah site,” according to the report. “Birds were also observed feeding on the insects. At times birds flew into the solar flux and ignited.”

When OLE staff visited Ivanpah, they observed many streamer events. It is claimed that these events represent the

combustion of loose debris or insects. Although some of the events are likely that, there were instances where the amount of smoke produced by the ignition could only be explained by a large flammable biomass such as a bird. Indeed OLE observed birds entering the solar flux and igniting, consequently becoming a “streamer”.

OLE saw what appeared to be a bird go down in flames every two minutes. According to the report, the birds killed at Ivanpah included a peregrine falcon, a red-shouldered hawk and an ash-throated flycatcher. The Fish and Wildlife biologists cautioned that their results are preliminary and that much more research needs to be done on avian mortality around solar power plants.

Still, the report from the forensics laboratory is sure to inflame long-running tensions over the impact of massive desert solar power plants on wildlife and what kind of trade-offs society is willing to make to fight climate change. The construction of Ivanpah, which was built by BrightSource Energy and now, is operated by NRG Energy, faced delays when it turned out the site 45 miles south of Las Vegas is a hot spot for the imperiled desert tortoise. Desert tortoise populations in some areas have declined by as much as 90% since the 1980s, and the Mojave population is listed as threatened. As late as the 1950’s the desert tortoise population averaged at least 200 adults per square mile. More recent studies show the level is now between 5-60 adults per square mile.

Concerns about the impacts of the Ivanpah Solar thermal project led the developers to hire some 100 biologists and spend US\$22 million caring for the tortoises on or near the site during construction. Despite this, in a 2011 Revised Biological

Assessment for the Ivanpah Solar Electric Generating System, the Bureau of Land Management anticipated the loss or significant degradation of 3,520 acres of tortoise habitat and the harm of 57–274 adult tortoises, 608 juveniles, and 236 eggs inside the work area, and 203 adult tortoises and 1,541 juvenile tortoises outside the work area. The BLM expects that most of the juvenile tortoises on the project were killed.

While about 60 percent of the 233 bird deaths occurred at Ivanpah, solar technologies considered more environmentally benign also proved fatal to birds.

The Desert Sunlight project was developed by First Solar, just north of Desert Center, California. This Solar Farm deploys hundreds of thousands of solar panels like those found on residential rooftops. But from a bird’s eye view, a sea of those shiny bluish panels can literally look like a sea, a desert oasis for them to alight. Most of the 61 avian deaths at the project—including a brown pelican and western grebes—were attributed to birds flying into the solar panels.

When Ivanpah started operations in 2014, the Department of Energy hailed its “innovative power-tower technology” and credited \$1.6 billion in federal subsidized loans as well as hundreds of millions in tax credits for making the 4,000-acre solar plant a reality.

Ivanpah uses natural gas to keep the water hot when there is not enough sun to do so. Bright Source Energy is petitioning the California government for permission to burn more natural gas that would emit 94,749 more tons of carbon dioxide per year, the equivalent of emissions from about 16,500 automobiles. If approved, the plant will produce about 35 percent of its electricity from fossil fuels.

Ivanpah has a gross capacity of 392 megawatts and with a total cost of \$2.2 billion; the plant averages \$5.6 million per megawatt of gross capacity. In comparison, a natural gas plant can be built for \$630 million with a capacity of 650 megawatts, costing just 0.97 million per megawatt—almost 6 times less.

According to the U.S. Energy Information Administration (EIA), solar thermal is the most expensive electricity generating technology. EIA indicates that the levelized cost of a new solar thermal plant averages 24.31 cents per kilowatt hour and could be as high as 38.8 cents per kilowatt hour. The average solar thermal plant cost is more than double the average cost of electricity in the United States. These plants will increase rates for the people of California, who are already paying electricity rates that are the 9th highest in the nation.

Back in March, the plant faced the possibility of being shut down because it wasn't delivering enough electricity to PG&E (PGC) as contracted. Ivanpah operated at about 45% of promised capacity in 2014 and 67% last year.

California's Public Utilities Commission decided to give the plant another year to meet its contractual obligations to the utility. But even then, the cost of electricity produced by Ivanpah is much higher than that from natural gas or even photovoltaic solar systems.

Not only has Ivanpah turned out to be far more expensive than other sources of energy, but it's less green than advertised. Last summer, PG&E paid close to \$200 per megawatt-hour for electricity from the plant, at a time when natural gas-powered plants cost about \$35 a megawatt-hour.

So, Ivanpah is one example of a power plant that can't meet its quota for energy production, relies on conventional sources of energy to operate, is far more costly than other sources of electricity, and is sucking up taxpayer dollars in the process. Wildlife preservation groups and environmentalists are being heard:

August 24, 2016 - San Bernardino CA - At a meeting yesterday well-attended by desert activists, County Supervisors gathered to vote 3-2 against giving permits to the unpopular Soda Mountain Solar Project. Here is a wrap-up of the articles:

- <http://www.mojavedesertblog.com/2016/08/county-rejects-environmental.html>
- <http://www.latimes.com/local/california/la-me-soda-mountain-solar-20160824-snap-story.html>
- <http://www.nationalparkstraveler.com/2016/08/soda-mountain-solar-project-fails-get-key-permits>

Utility-scale solar energy environmental considerations include land disturbance/land use impacts; potential impacts to specially designated areas; impacts to soil, water and air resources; impacts to vegetation, wildlife, wildlife habitat, and sensitive species; visual, cultural, paleontological, socioeconomic, and environmental justice impacts, and potential impacts from hazardous materials. In the desert, we bulldoze what is an astonishingly biologically diverse landscape for non-coal electricity so that we can pat ourselves on the back for being green as we leave the closet light on with the door shut.

*“What have they done to the earth?
What have they done to our fair sister?
Ravaged and plundered and ripped her and bit her
Stuck her with knives in the side of the dawn
And tied her with fences and dragged her down”
-Jim Morrison*

Keep track of what the California Energy Commission is doing by signing up for notification emails at:

- http://www.energy.ca.gov/newnav/proceedings_links.html

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