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## Exotic Animals in Clinical Practice

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Welcome to the world of exotic animal medicine! For those who practice it, it is the variety that provides the spice to veterinary life. In a practice that sees exotics, it would not be uncommon to see a dog for vaccines, a diabetic cat, an iguana with pathologic fractures, a ferret for a physical examination, and a feather-picking cockatoo all in one day. The challenge for those who work in this field lies in the vast differences in the species seen and the rapid increases in knowledge related to this field (Figure 1.1).

While not as common as small animal practices, more exclusively exotic animal practices are cropping up across the country. It is not surprising that just as a small animal practice may have a clinic cat, practices that see exotics exclusively may have a bird or an exotic companion mammal as their clinic pet (Figure 1.2).

In veterinary medicine, an exotic animal is any animal that is not a dog, cat, horse, or cow. Exotic animals include wildlife species, animals commonly used in research that are kept as pets, and animals native to various regions of the world, such as South America, Australia, and Africa. The interest in exotic animal medicine continues to grow, and this is related to the fact that the number of people who own exotic pets increases year after year. Based on data from the AVMA 2022 Sourcebook, it is estimated that 9.4% of households in the United States own “exotic pets,” meaning pets other than dogs and cats. With respect to exotic companion mammals, rabbits are the most popular at 1.2% of households. It was estimated that 1.4% of households own pet reptiles. Households owning birds in the United States are estimated to be 2.5% (AVMA 2022). These statistics are evidence that there is a need for veterinarians and veterinary technicians to provide care for these animals. It should come as no surprise that the client who brings their dog or cat into a small animal hospital also has one of the aforementioned pets and would welcome the chance to bring that pet to the hospital if exotic animal care was offered.

Many households that own dogs and cats also have an aquarium. In 2022, it was estimated that 2.7% of US households owned aquarium fish (AVMA 2022). Fish owners may have many aquariums, and some may even breed certain types of fish. Historically, fish owners have relied on other fish enthusiasts and Internet sites to learn about fish care because other than a local pet shop there may not have been any reliable resources for information and treatment of their fish. Having a veterinarian willing to treat fish would be a welcome idea once a client learns that services are available.

Continuing education is an important part of a veterinary technician’s professional enhancement, and its importance in exotic medicine cannot be overemphasized. What is known about the care and treatment of exotic animals is forever changing as more and more is learned. What one may have heard is the proper diet for a particular lizard one year may be something different the next year. More and more drugs are being tried in exotics. The use of analgesics continues to be an important topic in exotic animal medicine as more and more drugs have been tried and shown to be effective. This is largely because veterinary professionals are acknowledging that these species feel pain and because many owners no longer consider them to be expendable pets. This type of cutting-edge information is presented at conferences and in professional publications. This presents an added challenge to practices that see exotic animals, as information is forever changing.

With an increase in exotic pet ownership comes an increase in the amount and variety of continuing education available for veterinary professionals at veterinary conferences both in person and virtually. In recent years, there has been an increase in the number of continuing education hours related to exotic analgesia, behavior, and enrichment. Each summer, Exoticscon, a conference that features continuing education exclusively toward exotic



**Figure 1.1** An exclusively exotic animal medicine practice near Savannah, Georgia. This practice sees all types of exotic animals including reptiles, birds, exotic companion mammals, amphibians, and fish. (Courtesy of Dr. Stacey Wilkinson.)



**Figure 1.2** Red, the New Zealand Red rabbit is the clinic pet at an exclusively exotics practice. (Courtesy of Dr. Stacey Wilkinson.)

animal medicine, is held. This conference is open to veterinarians and veterinary technicians. VMX, held annually in January in Orlando, Florida, includes an extensive exotics program open to veterinary professionals.

There are now two veterinary technician specialties available for those interested in exotics. The Academy of Veterinary Zoological Medicine Technicians provides an avenue for becoming credentialed in zoo animal medicine

**Table 1.1** Summary of requirements and application process to become a VTS (Zoo).

1. Be a credentialed veterinary technician in your state of practice
2. Obtain 10,000 hours of clinical experience within the field of zoological medicine within 7 years prior to application
3. Obtain a minimum of 40 hours of CE related to zoological medicine or appropriate related topics within 5 years of application
4. Case log comprising a minimum of 40 cases within 3 years of application
5. Completion of mastery of skills list
6. Write five case reports
7. Two letters of recommendation
8. Submit application by deadline
9. Sit for examination

For the most current application packet, details, and information, visit [www.avzmt.org/AVZMT-Candidate](http://www.avzmt.org/AVZMT-Candidate).

(Table 1.1). Currently, there are 16 active and 2 emeritus zoo VTS'. The newest exotic specialty can be obtained through the Academy of Veterinary Technicians in Clinical Practice (Table 1.2). This academy has a concentration in exotic companion medicine. Currently, there are 15 veterinary technicians with this specialty.

**Table 1.2** Summary of requirements and application process to become a VTS (Exotic Companion Animal).

1. Be a credentialed veterinary technician in your state of practice
2. Obtain 10,000 hours of clinical experience within the field of exotic animals within 5 years prior to application with a minimum of 7,500 hours in exotic companion animals
3. Obtain 50 hours of CE with 37.5 hours related to exotic animals related to advanced clinical practice within 5 years of application
4. Case log comprising a minimum of 50 cases related to advanced clinical practice in the calendar year of the application
5. Completion of mastery of skills list
6. Write four case reports
7. Two letters of recommendation
8. Submit application by deadline
9. Sit for examination

For the most current application packet, details, and information, visit [avtcp.org/exotic-companion-animal.html](http://avtcp.org/exotic-companion-animal.html).

There are three associations and specialties available to veterinarians related to exotic animal medicine. The Association of Exotic Companion Mammals, established in 2000, and the related ABVP Exotic Companion Mammal Specialty were created to meet the needs of those who seek more education in these animals. This specialty had its first diplomats in 2010. The AEMV currently has over 900 members. Similarly, the Association of Reptile and Amphibian Veterinarians was established in 1992, and the related ABVP Reptile and Amphibian specialty was established in 2009. Additional evidence of increasing interest in exotic animal medicine is found in the number of veterinarians who have pursued a specialty in exotic medicine. As of 2019, there are 16 veterinarians with the ABVP specialty in reptiles and 32 in exotic companion mammals. Additionally, there are over 100 veterinarians with the ABVP specialty in avian medicine. These numbers do not reflect the many veterinarians who are members of the associations, desiring to gain valuable information in exotic animal medicine.

The Association of Avian Veterinarians, established in 1980, has roughly 1,700 members, but very few see avian patients exclusively. Approximately 135 veterinarians are boarded in avian medicine by the ABVP. For technicians who enjoy working with birds, it still remains difficult to find a practice that sees them for anything more than a beak, nail, or wing trim.

Because of the increase in interest in exotics evidenced by the number of members in these associations, more opportunities for technicians to work with exotics continue to increase. Opportunities to expand a technician's knowledge

base also exist as these three exotic associations allow technicians to become members.

While there has not been an explosion in exotic-only practices, many small animal practices have expanded their scope of practice to include more species. For example, a small animal clinic that may have only seen rabbits in the past may expand the number of species they are willing to see to include many or all of the exotic companion mammals. Conversely, there are small animal practices that will see reptiles.

There are several scenarios in which a technician interested in exotics may find this book helpful. A technician may take a job in a practice where exotics are seen but knows little about them. This book will help that person get up to speed with what one needs to know about popular exotic species. A technician may work for a veterinarian who wants to add exotics to the practice but does not have hands-on experience with them. Alternatively, a technician may find employment working with a wildlife rehabilitator and need to brush up on current information about exotics. Knowledge of exotic animals, their treatment, and their care is desirable when pursuing employment in the zoo and public aquarium environment.

For a technician who works for a veterinarian who would like to add exotics to the practice, the technician can play a key role in helping to establish them as patients. It is essential that the technician help the veterinarian understand how the practice will need to change to accommodate these species. A veterinarian must accept the fact that a 15- or 20-minute appointment will not suffice. In many cases, appointments of 30 minutes or longer will be required. Because husbandry and nutrition are typically the two most common causes of illness in exotic animals, a thorough history in these areas is essential. Also, because of the delicate nature of some of the species seen, more time may be required to perform a physical examination. In many cases, the owner will require client education to keep his or her pet healthy, so adequate time to do so will be required.

One of the challenges in treating exotic animals is that many will keep the appearance of health as long as they can, as this is what is beneficial in the wild to prevent becoming attractive to a predator. A bird is a great example of this. A bird can be incredibly ill and even be in actuality dangerously thin, but the owner will think it is fine because its feather appearance is still being maintained. A patient like this is very fragile, so handling it in a stressful clinical environment may be just what could tip them over the edge, resulting in death. Because one may have a very limited time to perform a physical examination or perform a procedure, it is the technician's job to make sure that all supplies and instruments needed for the examination



**Figure 1.3** A veterinary technician intubating a cockatoo. (Courtesy of Ashley MaGaha.)

and/or treatment are ready prior to handling the animal. With many patients, time is of the essence.

Anesthesia for exotic patients poses a huge change from small animal medicine in that a veterinary technician who is experienced with exotics will be required to monitor anesthesia on ALL patients for ALL procedures. These patients require second-to-second monitoring. This is especially true for avian patients (Figure 1.3).

A veterinary technician who has an interest in exotic animal medicine will be expected to be a trusted expert in restraint techniques, which can vary from species to species. Different types of lizards require different restraint techniques, for example. Proper restraint ensures the safety of the veterinary staff and the patient whether dealing with a cockatoo or a chinchilla.

The front office staff must be knowledgeable and interested in exotic pets as they will be the first people the pet owner comes in contact with. The worst thing that can happen is for a snake owner, for example, to come to the front desk and the receptionist recoils in fear at the sight of it. This is not only unprofessional behavior but one that puts the knowledge of the doctors into question. Likewise, if a receptionist does not know the difference between a macaw and a cockatoo, the bird owner may question the knowledge of the doctors, as it may appear that the clinic does not see many birds. When an appointment is made, it is crucial that the exact species of animal is obtained. For example, a “lizard appointment” is not enough information. What type of lizard is important, especially since it is possible that

the patient coming in is not one the veterinarian or technician is familiar with. In this case, research about the specific lizard coming in can be done before it arrives.

Another consideration when deciding to see exotic pets is where they are going to be housed in the hospital. Because many of the exotic companion mammals seen are prey animals, where they are housed in relation to dogs and cats must be taken into account. For example, a rabbit should not be caged where a cat patient can watch it. This alone can create undue added stress for a rabbit patient, who is already stressed being in the hospital environment. An exotic pet should not have to add the fear of being eaten to its worries during a hospital stay.

One of the most important roles of the veterinary technician is that of a meticulous history-taker. As each chapter illustrates, a simple history will not do. It is not uncommon for a practice that sees exotics to have a separate history form from those used for dogs and cats. For example, the practice may have a history sheet for reptiles, another for exotic companion mammals as well as one for avian patients. Having history forms such as these not only ensures that all necessary questions are asked, but it also saves time. Wild-caught species can have different health problems than captive-raised ones, so the origin of the pet needs to be ascertained. How the pet is housed is vitally important, and this means not only asking what it is housed in but also the cage size, construction, substrate used, and where it is kept at the home. If the animal is not brought in the cage it is housed in, the technician, after gathering the history, should be able to create a mental picture of what the cage at home looks like. In a world in which most people carry a cell phone, it would be possible to have the receptionist who schedules the appointment ask the owner to take a picture of the cage prior to their visit to the practice.

For practices that see fish, a specific history sheet for them is important as well. Questions similar to those asked in other exotic patients should be asked. Knowing the aquarium size, whether the fish are in fresh or salt water, what diets are fed, how many fish are in the tank or pond, and where it is in a household or yard is important information. Having the owner provide pictures of their tanks/ponds is beneficial for these patients as well.

The same is true for gathering adequate information about the pet’s diet. It is not good enough to ask what is fed as what is fed may not be what is consumed. For example, an owner may report that their Amazon parrot’s daily diet is made up of fruits, vegetables, and seeds. When asked how much of each is consumed each day, the answer may be mostly seeds, which is an inadequate diet. For the practice that sees reptiles that are insectivores, a veterinary technician must be knowledgeable about what insects are safe and nutritious to feed and what ones are not.

In many cases, owners of exotics may have gained misinformation about their pet's care from the pet shop where it was purchased. While some may be knowledgeable, many pet shop employees simply do not know the correct information about the species they sell. The veterinary technician should be able to give owners the correct information about husbandry and nutrition without chastising them for their mistakes. Many honestly may not know that what they were doing was wrong. Owners may have obtained books that are not written by reputable sources or found information on the Internet that is inaccurate. In a clinic that sees fish, the veterinary technician can offer advice on how to set up a tank and avoid common pitfalls that happen to new fish owners, such as buying too many fish for a brand-new tank, or not quarantining new additions. Owners value information on how to keep their pets healthy and their veterinary clinic should be the source of that information.

The veterinary technician can also be of value when helping a client make a decision about what type of exotic pet to buy. For example, an iguana is considered to be a difficult reptile to keep as its housing and nutrition requirements are demanding. A bearded dragon may be a better choice. A budgie may be a better choice for a first-time bird owner than a macaw, which can be noisy and messy as well as requiring a lot of behavioral enrichment. Because a macaw would require a larger cage than a budgie, the size of the client's home may factor into the decision. The size of a client's home can be a consideration with certain reptiles as well.

The topic of conservation of species is also important. New exotic pet owners should be encouraged to acquire captive-raised species rather than wild-caught if possible. With many exotic species, numbers in the wild are diminishing. Captive-raised species can also be a benefit as they may have fewer disease and behavioral problems. For example, wild-caught snakes typically have more parasites than captive-raised ones. Most exotic species desired as pets can be obtained from captive-raised sources.

The veterinary technician can also provide the veterinarian who wants to add exotics to the practice ideas on how to market this change. It is easy for a clinic to advertise this addition by putting a sign up at the reception desk and mentioning it on the clinic's website and on social media sites. If a clinic produces a periodic newsletter, the technician can add an item related to exotics. A simple, low-cost service to offer to fish-owning clients is water testing. By using a professional water testing kit rather than one found in a pet shop, clients can see the value in what they are paying for. If a veterinarian wants to add fish to the practice, offering house calls to evaluate fish in their environment can

be offered. The veterinary technician can do water testing and obtain a history while the veterinarian evaluates the fish. With the help of good marketing, the practice soon can become the go-to resource for their clients and the community to obtain information about the ins and outs of keeping and caring for exotic animals as pets.

Offering services for exotic patients does not require a large amount of money, as the average animal hospital will have most of the necessary supplies and equipment needed to treat exotics. There are some items that will need to be purchased, however. For example, a gram scale will be required to weigh many of the very small patients. Microtainer blood collection tubes are also essential. For the veterinarian who desires to see fish, the good news is that it does not require a huge expenditure to add them. Many items needed to treat fish are those that a clinic already has. Appendix 12 provides a list of equipment useful in exotic practices.

One should never underestimate the strength of the human-animal bond that exists between owners and their exotic pets. An owner can be as bonded to a mouse or a snake as another owner would be to a dog or horse. Just as one should never assume what an owner is willing to spend for medical care on dogs, cats, and horses, one should never assume what exotic pet owners would be willing to spend for their pets. The low cost of some exotic companion mammals does not mean that owners will not seek quality veterinary care. It is not uncommon to see a devoted owner spend hundreds of dollars on a surgical procedure for a pet rat. For those who keep fish, they can range in cost from around \$3 for a fancy guppy to \$100 or more for some marine species (Noga 2010). There are fish kept in ponds, such as koi, which can cost several thousands of dollars. Fish owners can and do become very attached to their fish and may even have names for them. These owners will be willing to spend money to treat them and learn how to properly care for them.

Practices seeing exotic pets must be aware of and provide current standards of care as these have advanced in exotic animal medicine. For example, during anesthesia, monitoring devices used in dogs and cats can and should be used, such as pulse oximetry and ECGs. Providing analgesia is an important consideration as well. Multimodal techniques as well as regional nerve blocks are used in exotic animals including reptiles. In recent years, there has been an emphasis on creating stress/anxiety-free clinical environments and techniques for dogs, cats, and horses. These practices can and should be used with exotic patients when possible.

There are veterinary practices that see exotic pets that will also see primates and venomous species. Because of the dangers to humans from these animals, veterinarians will

typically set the “rules of engagement” regarding the care and treatment of these animals. For example, the veterinarian may only see a primate or a venomous snake after hours, when all other employees and clients have left the premises. Likewise, a veterinarian may require that the owner of a venomous snake provide in-date antivenom along with the snake.

Some veterinarians will not see large exotic cats in practice due to safety concerns. And yes, there are people who have permits to keep them. Others will see these animals on the owner’s premises as long as handling equipment, such as a squeeze cage, is provided. It will be important that **all** employees know the clinic’s protocol for seeing primates, venomous species, and large cats.

Every state has its own laws regarding which species are legal to keep as pets and which are not and changes in these laws happen frequently. It is up to the practice to be apprised of the current laws involving ownership of exotic animals in the municipality and state in which the clinic is located. It is up to the veterinarian to decide whether they will see pets that may in fact be illegal pets and to communicate this information to the technicians and other staff (Figure 1.4).

Because many veterinary technicians who work with exotics have an interest in working in a zoo or aquarium,



**Figure 1.4** A technician drawing blood from a skunk. (Courtesy of Ryan Cheek.)

included are two chapters devoted to explaining the technician’s role in these environments.

In response to the increasing interest in exotics, this book provides a compilation of the most recent practices in the area of exotic animal care. Exotic animal medicine provides a veterinary technician with the opportunity to utilize all of their skills and knowledge in a way that has a direct benefit to the practice and the patients.

## References

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