

Lizard Sexing and DNA Testing

I have had many inquiries about performing DNA sexing on lizards and reptiles.

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Can you direct me to a veterinary lab that does lizard sexing? Can it be done on blood, and if so, how much is needed? Where do you suggest obtaining the sample?

I've had an inquiry from a client as to sexing a chameleon (don't know species, size or age at the moment). Can you advise?

Good questions. I have had many inquiries about performing DNA sexing on reptiles. The technology has been available for many avian species for over 15 years, and involves removing only a drop of blood for DNA analysis.

Unfortunately, the technology is not quite so simple in herps, as the DNA portions of the chromosomes that determine the sex are not as easily identified as they are in avian species. To determine the DNA sequencing of herps would require some sort of grant or funding in order to study the chromosomes and genes in order to identify the portions involved with determining sex.

At this time, the only herps that can be sexed by DNA analysis are green iguanas (*Iguana iguana*) and Komodo dragons (*Varanus komodoensis*), according to an employee at Zoogen, a well-known company that performs DNA sexing of many avian species.

Until DNA sexing becomes commercially available for the reptile species, we will need to rely on other methods of sexing herps. For example, many chameleons have secondary sexual characteristics that can help tell males from females. Many herps have two bulges behind the cloaca, in the proximal tail, from the hemipenes. Other species have enlarged pores, either found on the ventral femur or near the cloaca, found in males. Bearded dragons have a prominent dark beard in mature males. Some species may be probed to determine the sex, by examining the depth to which a probe will go when inserted caudally into the cloaca.

Many herp textbooks describe methods for determining the sex of the different species. You can also ask knowledgeable herpers for their tips on how to sex the different species.

If you need to draw blood from a herp for other reasons, again, there are many excellent textbooks that can show you how to perform venipuncture. In many herps, there is an accessible tail vein. In large snakes, the palatine vein may be used (in the oropharynx), and cardiac puncture is often employed. In some lizards and frogs and toads, there is a large, accessible vein that runs along the ventral abdomen, on the midline. If you are new to herps, I would recommend attending some herp continuing education courses and the associated wet labs, which will give you hands-on experience in drawing blood and performing basic procedures on the more common herps.

Need a Herp Vet?

If you are looking for a herp-knowledgeable veterinarian in your area, a good place to start is by checking the list of members on the Association of Reptilian and Amphibian Veterinarian (ARAV) web site at www.arav.com. Look for DVMs who appear to maintain actual veterinary offices that you could contact.