Evidence act 2009 (Vic)

Certificate of expert evidence pursuant to section 177

I, Mr Richard Funk, MA, DVM, of VCA Mesa Animal Hospital, 858 North Country Club Drive, Mesa Arizona, 85201, USA state:

1. I have a veterinary science degree issued by The Ohio State University in 1985.
2. My expertise with reptile medicine and surgery is extensive and includes: I have written chapters in both editions of the Mader veterinary texts on medicine and surgery of reptiles; I have served as President of the Association of Reptilian and Amphibian Veterinarians and still serve on he editorial committee of its scientific journal; I lecture regularly at many veterinary and herp conferences on topics related to reptile medicine and surgery, including each year at the annual conference of the Association of Reptilian and Amphibian Veterinarians and most recently, on 7/23/2011 at the Biology of Rattlesnakes Conference; I see and treat reptiles as part of my daily veterinary caseload; I serve as the consulting veterinarian of record for the snake collections, most of which are venomous, at Arizona State University and at Mesa Community College.
3. I have worked professionally as a veterinary surgeon specialising in reptiles for 26 years.
4. I have published material on reptile veterinary surgery and practice, including a chapter on surgically devenomizing snakes, otherwise known as "venomoid surgery", in the textbook "Reptile Medicine and Surgery", edited by Doug Mader. That book, published in 2006, is the internationally regarded textbook on the subject and would be used as a major reference by reptile veterinarians everywhere.
5. I have performed venomoid surgery (devenomizing snakes) on a number of occasions, by removing the venom glands and ducts from the snakes.
6. The venom gland (one of a pair, one on each side of the head), is situated in the roof of the mouth, separated from the oral cavity by a thin layer of skin and is a simple sac like organ without folds. It sits in place affixed to a ball of muscle at the rear and a duct at the anterior end. This duct runs to the jawline and fang. Other than the anchor points just described at each end, there is little connective tissue to hold the venom gland in place or to the muscle running along side the gland.
7. Removal of the venom gland and duct involves separation from the anchor points as well as from connective tissues along the line of the venom gland.
8. Once removed, there is no ability of a snake to produce venom and once any residual venom is removed from the snake's oral region, there is no possible regeneration or venomous capacity for the snake.
9. In my expert opinion, the venom gland cannot possibly regenerate and there is no evidence I have seen to suggest that this can in fact happen.

10. Prior to declaring a snake venomoid, it should be tested as such to show that it does not yield venom. As far as I am concerned this is routine and can be done several ways, including by normal venom extraction methods (known as "milking").
11. I am unaware of any cases of "failure" of the venomoid operation as just described, failure being described as regeneration of venom producing ability in the snake in any way, demonstrated either via testing the snake or a venomous bite after surgery.
12. In a snake shown to be venomoid (not venomous) for several months and has had venom glands removed in total, it can be safely stated that the snake will never regenerate venom or venom-producing tissues.
13. Compared to other potential reptile surgeries, the full removal of venom glands is relatively simple and I have no doubt that a person such as Raymond Hoser could perform the operation competantly in terms of rendering a dangerous species of snake, non-venomous. However, in the United States these surgeries must be performed by a licensed veterinarian.
14. Furthermore, his published test results of 100% success and videos of him sustaining bites from the relevant snakes, without effect, confirm my view.
15. Raymond Hoser is as far as I am aware the only person in Australia to have performed venomoid surgery and the only known person with expertise in this procedure in Australia.
16. I am aware of claims made on the internet to the effect that venom glands, once removed, can regenerate. I have seen no evidence of this and believe them to be false.
17. While I would not necessarily regard being bitten by a venomoid snake as a sensible first test to see if the operation worked, I can fully understand Hoser's frustration with false claims about venomoids regenerating venom and his production of videos of bites to himself to rebutt false claims that the said snakes have regenerated venom and are dangerous.
18. In response to a potential claim that the Raymond Hoser venomoids have regenerated venom and that Hoser has been lucky in his videos having sustained so-called "dry bites", that being venomous snake bites where the snake has failied to yield venom it has within it's mouth region, I can say that the potential claim would not have merit or basis.
19. Dry bites usually occur either when a person is bitten by a non-venomous snake and misidentifies it as dangerous, or alternatively if they are nicked by a fang before the snake closes it's mouth and pumps the venom into the body.
20. The idea that several highly venomous snakes could be forced to give a person bites, by being made to bite hard on an arm and chew, with all bites being "dry bites" is ludicrous and anyone proferring such a possibility would be reckless or misinformed.
21. The venom gland in a snake presents as an effectively sealed organ and without folds, so it is highly unlikely that a surgeon with even minimal experience would operate to remove it and inadvertently leave some

behind, or even some form of cellular remnant of the gland that could potentially regenerate, especially if the gland is removed by being severed from all other parts of the mouth, including blood vessels.

22. I have known of Raymond Hoser as an Australian herpetologist for many years, having read his publications in journals since the 1980's.
23. Both myself and others regard him as an expert in many areas of herpetology. This would include an ability to perform minor surgeries on snakes and other reptiles, noting that it is not uncommon for herpetologists to deal with veterinary matters "in house", due to factors such as an immediate need to deal with medical issues as they arise, such as in an overnight emergency, or wildlife "rescue" and the situation where a surgeon with expertise with reptiles may not be available.
24. Based on his paper, it is clear he practiced the procedure to devenomize snakes on dead snakes and that his operations were done on live snakes when he was familiar with the process.
25. I first met Raymond Hoser in 1993 at Orlando, Florida, when he was invited there as a reptile expert to address the largest gathering of herpetologists, reptile dealers and hobbyists in the United States.
26. He also signed one of his many published books for me.
27. I am aware that Raymond Hoser has performed venomoid surgery on Australian snakes using a technique removing the entire venom glands, as he has published in 2004 in the journal Herptile, published on the web at: http://www.smuggled.com/VenArt1.htm and http://www.smuggled.com/VenArt1p.htm and elsewhere.
28. Having seen the images of the surgery accompanying the paper, including of the glands being removed, I have no doubt that those snakes have been made non venomous and permenantly.
29. This view is supported by several other facts, including, that Mr. Hoser has published this fact in 2004 and since and I have no reason to disbelieve the claim. Furthermore there has been no evidence from any other source to rebutt Hoser's claim.
30. Mr Hoser's use of cold torpor as a method of sedation, would not in my view alter his ability to effectively remove the venom glands, as opposed to the more commonly used gas sedation. However, here I prefer to use gas anesthesia and appropriate pain medications at the time of surgery.
31. More importantly and beyond rebuttal, I have seen a number of videos of the same snakes, all of highly venomous species, several years post operation, being made to bite Mr Hoser, in front of an audience of independent witnesses and Mr Hoser showing no signs of envenomation.
32. These are on the web at: http://www.smuggled.com/TBPPE2.mpg and elsewhere
33. The feat described would not be possible with any snake of those species, if any residual venom production capacity remained.
34. The snakes shown will as a matter of course kill a person without treatment, and that is from a bite from just one.

35. To expect a person to sustain bites from several with no ill effect would not be possible, if any one had venom.
36. Therefore I can only conclude that any claim that Hoser's snakes may potentially regenerate venom would be based on either malice or commercially motivated, perhaps by a person working for an enterprise that does not have devenomized snakes.
37. A snake that has had it's venom glands removed can still digest food normally and lives a perfectly normal life.
38. Healing from the operation and surgery is rapid and generally not noteworthy in any way.
39. I am aware of claims made, that snakes that been devenomized by duct ligation only (that is the duct is cut and gland is not removed), may be capable of regeneration of the abilility to deliver venomous bite.
40. In terms of this I can state that I have never performed venomoid surgery using only the ductal ligation method since trying it and abandoning this technique in 1983-1984.
41. In terms of the Hoser operations, it is clear also that he has also not performed surgery this way. That is, his operations have also included full gland removal, therefore removing possibility of gland regeneration.
42. In 2011, I am aware of reports of no less than four well-known and experienced snake handlers being killed by their own venomous snakes, namely Luke Yeomans, Aleta Stacey, Dirk Spring and Wade Westbrook.
43. No matter how much experience a snake handler has, mistakes can be made and bites occur.
44. Devenomizing snakes effectively eliminates this safety risk in terms of venomous snake bites and is the only way to do this in terms of a given snake and a snake handler.
45. It is sensible for anyone handling a given highly venomous snake regularly, or where there is any potential contact with a third person, such as a person viewing a snake display or demonstration.
46. From a public safety point of view, a person who does snake displays in public with highly venomous species, would be reckless not to use devenomized snakes.
47. Even if a snake is displayed behind a barrier or cage, there is a risk of a bite, if a determined person breaches the barrier or cage or there is a momentary lapse of security. Likewise if the snake were to be stolen or escape.
48. Devenomized snakes pose no venomous bite risk to handler, staff or others.
49. A devenomized snake is effectively a non-venomous snake. While a bite from it could still draw blood, assuming the fangs or other teeth breach the skin, as is the case for most non-venomous snakes, the result would be the same. That is superficial wounds.
50. Although there is potential risk for injury or infection, this is no greater than for a bite from a non-venomous snake, or any other superficial wound and would not in itself be regarded as a serious safety issue.

51. Unless that snake was particularly large, and with particularly large fangs, such as a Gaboon Viper, a bite from a devenomized snake would not as a matter of course require any medical treatment other than cleaning of any bite wound area.
52. From the videos seen of Raymond Hoser being bitten by his venomoids it is clear that the fangs of these snakes are sufficiently small (as is typical for Australian species) as to not warrant hosptialization in the event of a bite.
53. Claims that bites from venomoid snakes may lead to one or more of the following: A/ lacerations from the snakes fangs, B/ teeth being embedded within the body of a bite victim after breaking off from the snake's jaw, C/ become infected due to bacteria present, D/ may carry a saliva that may cause an allergic reaction in a person, are all equally applicable to non-venomous snakes or other kinds of animals inclouding dogs, cats, rabbits, guinea pigs and so on.
54. In fact these potential issues are more likely for non-venomous species due to the general fact that these snakes have more large teeth in their mouths, needed to hold onto prey when they bite it.
55. Notwithstanding these four variables, the risks posed by the bites of all but the largest non-venomous (or devenomized) snakes are regarded as being minimal as compared to those of other kinds of animals, including for example dogs, cats, etc, and as a result, the handling of non-venomous snakes by people is not regulated in most jurisdictions.
56. Certainly, there is no general reluctance for wildlife demonstrators to allow handling of pythons and other large non-venomous snakes based on the relatively minor risks outlined above. I am also unaware of any jurisdiction in the world regulating or prohibiting the handling of non-venomous snakes on the basis of injuries caused by potential bites.
57. Within these parameters bites from large snakes, over 2 metres are those more likely to cause issues if they bite a person.

Signed .....

Dated Jan. 25, 2011