

HOW LONG BEFORE WE DISCARD VISUAL BREED ID?

2012 SURVEY CONFIRMS THAT EVEN DOG EXPERTS CAN'T JUST TELL BY LOOKING.

In the 1960's, John Paul Scott and John L. Fuller showed that mixed-breed dogs may bear little or no resemblance to their purebred ancestors.¹ In 2009, Dr. Victoria Voith and colleagues published a study indicating a low agreement between the breeds identified by adoption agencies and DNA identification of the same dogs.²

The 5000+ responders were only correct – that is, named at least one of the breeds detected by DNA analysis – less than 1/3 of the time. And no profession did much better than any other. Every profession's responses, in total, were correct less than 1/3 of the time.

The Maddie's® Shelter Medicine Program at the University of Florida's College of Veterinary Medicine has also been looking systematically into the problem of visual breed identification of dogs of unknown origin. A survey conducted at four Florida animal shelters confirmed the unreliability of visual breed identification, thus calling into question yet again its use for dog adoption, lost and found, and regulation.³

The Maddie's® Shelter Medicine Program conducted an expanded survey in 2012.^{4,5} An array of dog experts – breeders, trainers, groomers, veterinarians, shelter staff, rescuers, and others – visually assessed breeds in the dogs in a series of photographs. More than 5,000 completed the survey. Their visual assessments were then compared to DNA breed profiles of the dogs.

Each dog in the survey had at least 25% of a single breed in its DNA profile. A response was considered accurate if it named any of the breeds DNA analysis had detected in the dog, no matter how many other breeds had been detected, and whether or not the breed guessed was a predominant breed in the dog, or only had been detected in a trace amount. Since, in almost every dog multiple breeds had been detected, there were lots of opportunities to be correct. Given the findings of earlier studies, the results were unsurprising. The 5000+ responders were only correct – that is, named at least one of the breeds detected by DNA analysis – less than 1/3 of the time. And no

profession did significantly better than any other. Every profession's responses, in total, were correct less than 1/3 of the time.

In addition, from the variety of visual identifications associated with almost all of the dogs, it is clear that these experts did not agree with each other when they looked at the same dog.* These results corroborate the work that Scott and Fuller published 50+ years ago, that the offspring of even purebred parents are dramatically different in appearance than either of the parent breeds. They are in turn supported by the reports of geneticists that a remarkably small amount of genetic material exerts a remarkably large effect on the size, shape, etc. of a dog.⁶

These reports argue that it is long past time for dog experts to accept the inescapable limitations of visual breed identification of mixed-breed dogs of unknown origin. One step in the right direction is describing mixed-breed dogs without assigning a breed. A 2012 report by two veterinarians and an attorney that appeared in the *Journal of the American Veterinary Medical Association* recommended that veterinarians will better serve their clients and their clients' pets if they adopt a "single non-breed based term to describe all dogs of unknown parentage."⁷



Dog 57

- 25% Beauceron
- 25% Siberian Husky
- 25% American Staffordshire Terrier
- 12.73% Schipperke

Top Responses

- Labrador Retriever
- German Shepherd Dog
- No Predominant Breed
- Golden Retriever
- Anatolian Shepherd Dog

One of the 100 dogs in the study, with corresponding DNA results and visual assessments of survey respondents.

This sound advice for veterinarians is also applicable to animal sheltering, animal control, and public policy. We have placed an entirely unwarranted confidence in shelter intake data, adoption policy and practices, dog bite studies, bite reports, and news accounts that either relate incidents to breed, or presume to predict a dog's future behavior based on breed. Visual breed identification did not only become inaccurate as a result of the surveys mentioned above, or even when *Genetics and the Social Behavior of the Dog* was published back in 1965. Rather, these findings call our attention to what has always been the case.

What Dr. Voith pointed out to the American Veterinary Medical Association in 2009 bears repeating:

"The discrepancy between breed identifications based on opinion and DNA analysis, as well as concerns about reliability of data collected based on media reports, draws into question the validity and enforcement of public and private policies pertaining to dog breeds."¹⁸

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*For up to date research on visual breed-identification, including inter-observer reliability, please see the National Canine Research Council Website and Research Library.

SOURCES and NOTES

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