## Stud Books

by Lisa Dubé Forman

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ur society is advancing through the early 21st century, making remarkable advances in innumerable fields of research and development, innovations, and technologies. We, as a society embrace these changes. We most certainly look forward to, even expect and demand, the newest inventions, intelligence and capabilities.

As a paradox though, dog fanciers' convictions about canine husbandry, the mating and production of offspring appear on the whole, not to have evolved. Instead, over the years dog fanciers' way of thinking has, in certain cases, regressed. Our formed judgements, many of which are not necessarily based on facts, lack maturity and growth. Conventionally, we doggedly hold on to old beliefs that a closed stud book is the only guarantee to maintain purity and perpetuation of our breeds as they document parentage and pedigrees. The sanctity of the stud book is likened to that of a bible. The truth that so many refuse to accept or admit is that a Stud Book is simply genetic isolationism, warts and all. Suggestions of crossbreeding or backcrossing goes against everything we 'know' about purebred dogs and selective breeding. This is because

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the process of line breeding and inbreeding to inherit genes, fix qualities and characteristics of a breed's progenitors or foundation stock has been a consecrated practice for more than several centuries now. Modern breeding procedures and recording the descent of domesticated animals that were linked to a public registry developed during the eighteenth century, in the early parts of Britain's Industrial Revolution. Once ingrained in canine societal doctrine, it has become nearly impossible to pry such tenet loose.

An excellent example of such is the well-known Dalmatian backcross project - The Dalmatian Study, The Genetic Correction of Health Problems, by Robert H. Schaible, Ph.D. Quickly, for those who are not familiar, Schaible, a medical geneticist, did in the early 1970s cross a Dalmatian to its nearest relative, the English Pointer. He did so, as he reported, "In response to two serious health problems positively correlated with the high uric acid levels resulting from homozygosity of the gene for the defect in uric acid metabolism. Those being a unique form of dermatitis (hives) and the urate form of urinary calculi (bladder stones and kidney stones)." Using the Pointer, Schaible desired to minimize genetic differences except for the pair of genes controlling uric acid metabolism. His work was by nearly all measures, victorious. He demonstrated and proved that, "The gene for the defect in uric acid metabolism was not required to achieve the Dalmatian spotting pattern and the normal allele for metabolism of uric acid would eliminate the prevalent form of

Dr. Schaible's landmark achievement was breeding dogs befitting the Dalmatian Standard and who had normal metabolism of uric acid. As he reported, the progeny of backcross four (fourth generation) were indistinguishable from purebred Dalmatians with the pedigree of the fourth backcross revealing the Pointer once in the fifth generation pedigree of 32 ancestors. The other 31 were all Dalmatians. At the February 1981 AKC Board of Directors meeting, with the approval of the Dalmatian Club of America (DCOA), the request to register the subsequent fifth generation progeny was approved, or so everyone thought. Suffice to say a controversy ensued afterwards amongst the DCOA members. Some may consider the latter a vast understatement, which resulted in the AKC allowing the registrations to stand, but rescinding registrations for any resulting progeny from these fifth generation puppies. Reportedly, the aversion for allowing the backcrossed Dalmatians were based on a few objections and claims. These included the claim that Stone Disease was no longer a problem in the breed despite some health studies showing Dalmatians were 9-10 times more likely to form urate stones than the general canine population. Charges were lobbed that the backcrossed Dalmatians would introduce Pointer diseases, and some subjectively protested that Schaible's dogs were poor quality, whose Dalmatian spots were atypical.

After all interested parties debated the issue for decades — yes, decades — the AKC Canine Health & Welfare Committee, in October 2009, strongly recommended that the AKC Board of Directors accept the registrations of the Back Cross Dalmatians. Moreover, in their 2009 report, the committee stated that these Dalmatians,

then in their twelfth generation, were 99.97% pure. Culmination came at the end of 2011, when the Dalmatian Club of America voted to accept the registrations of the Back Cross Dalmatians.

The American Kennel Club recognized breeds' Stud Books, administered by the AKC, are to the best of my knowledge all closed, except Foundation Stock breeds and the Basenji Stud Book, which closes December 2018. I do not venture that all things are equal, nor am I comparing these two breeds' genetic loads, though I am versed in both breeds' history. Still, I cannot fail to notice the marked disparity in reactions to the introduction of new stock. For the record, the Basenji Club of America Stud Book (BCOA) was previously opened in 1990, and again a second time in 2009. It currently is open to allow new parent club-approved stock entry.

Most fanciers may not be familiar with the steps necessary to open a stud book or the policing of such. A breed Stud Book falls under the guardianship of the AKC Board of Directors, as provided by the following Articles in the Charter and Bylaws of the American Kennel Club. Article X states, "The Board shall have supervision and control of the Stud Book, the registration of purebred dogs, kennel names and the transfers thereof, and determine the manner in which such records shall be preserved." Article IV states, "It shall be the duty of the Board of Directors of the AKC to and it shall define precisely the true type of each breed of purebred dogs recognized by the AKC as eligible for registration in its Stud Book."

As often is the case, the AKC interprets the foregoing Articles with great flourish as evidenced in their AKC October 2002 Board Meeting minutes where they disseminated official guidelines for the opening of a closed Stud Book. The guidelines were prefaced first by the flowery delivery, "AKC Board of Directors has the authority and ultimate responsibility over all matters pertaining to the AKC registry." Here I take a moment to ponder what would happen to a breed's Stud Book if a Parent Club resigned its AKC membership? Does the Stud Book registry get turned over to the Parent Club or does the AKC retain ownership even though the Parent Club has ownership of their breed standards? Back to the meeting's minutes, they continued, "However, when stud book issues affecting only one breed are at issue, the AKC Board has always given great weight to the input of the breed Parent Club. AKC has from time to time received requests from Parent Clubs to open or to close the stud book to dogs with pedigrees from registries other than AKC in the United States. Guidelines have been established to handle these requests."

These guidelines require that requests must provide justification and assessments by the Parent Club if the need is desirable, important or critical for the welfare of the breed. Additionally, a summary of arguments against, if any, and a sample ballot that the parent club would use to conduct a vote of its membership are compulsory. The latter requires a ½ affirmative vote of those voting. The justifications set forth would adhere to, but not be limited to, the following criteria.

A. Gene Pool Diversity - If the gene pool lacks quality spec-

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imens, or is overly inbred, resulting in genetic problems, this must be documented. The club's long- and short-term strategic plan must be explained along with what educational initiatives the club would undertake.

- B. Too Few Dogs Registered With AKC If this reason is given, the club must specify how many dogs it would expect to be registered with AKC and the basis of this expectation. As above, the club must document its long- and short-term plan to encourage breeders and owners to register their dogs with AKC.
- C. Health This must include documented scientific evidence that a problem exists, it is getting worse, and that there is a potential solution. Any studies cited must be credible and widely accepted.
- D. Other Reason Any reason must include details on how the addition of dogs would improve the breed or address a specific problem. It should include the club's strategic plan to attract dogs to the AKC registry and to encourage breeding to these dogs.

Officially and publicly, the Basenji Club of America (BCOA) sought to insure the integrity of the breed by increasing their breed's viability through the opening of their Stud Book. They looked to improve breed welfare and to expand their limited, modern gene pool, which they described as problematic. Moreover, included in their petition of 2008, they set forth their determination that the initial opening in 1990, "...served the betterment of the breed and demonstrated that importing new African stock directly reduced the degree of inbreeding and, more importantly, functions to reduce or even eliminate the expression of deadly health issues."

One has to admire this club for their valid and thorough proposition. They based this on the principle that, "Coming from such a limited effective population of founders, genetic material can be rapidly lost and continued genetic problems develop...Sound population genetics suggests that an effective population size could require as many as 300 unrelated individuals in order to have a population large enough to maintain normal amounts of additive genes to retain 95 percent heterozygosity for 100 years. When the number of breeding individuals gets below critical levels, the loss of genetic variation is very rapid. The number of contributing founders in a population must be large enough to carry and preserve genetic variation. Realistically, in the current circumstances, our strategy is to achieve a goal of 100 founders to infuse critical genetic vitality into the breed."

There has been at least one other example where a Stud Book has been opened due to isolation mechanics. In the late 1940s, the Alaskan Malamute Club of America opened their Stud Book with AKC's assent, of course. They did so because after World War II the breed's viability was endangered as there were too few registered Malamutes to maintain the breed. What's more,

this too was not without "a great deal of strife in the club over the years." Whether this strife was due to the adding of two other non-AKC lines or that the window of opportunity was not long enough is unclear. The Parent Club's own website does not specify which of the acts produced the most protests.

"Human beings by nature are reluctant to change, preferring to stay with the familiar." This truth never ceases to amaze me and, in my opinion, there are few areas of society where it is more prominent than in our dog world, particularly canine husbandry. Even while faced with terminal health issues affecting 15%, 20%, possibly 30% of the breed population, fanciers object to the mere notion of opening a Stud Book to incorporate genetic material from nearest relatives. It is both fascinating and sad, all at the same time. For the record, I am not advocating opening every breed's Stud Book. Conversely, there are a number of breeds liable to suffer from the Founder Effect, Population Bottleneck, and Inbreeding Depression. Other breeds may be at risk due to geographic isolation, or the increase and expression of deadly health issues. Further, a species does not have to be isolated on an island to be genetically isolated. Note that geographic isolation can occur in our scarce, even rare, recognized breeds that cannot benefit from variation in its individuals due to geography, despite modern technology permitting semen collection and insemination. Oftentimes this simply is not practical. For instance, having a discussion with an old-time breeder in a distant, foreign land about contemporary reproduction practices involving their collecting, freezing and shipping of semen.

The preceding examples of responsible breed stewardship assure those breeds' expansion and welfare. These visionaries sought enrichment by thinking outside of the box, in other words, they thought freely, unbound by old, or limiting structures, rules, or practices. Evolution of our mindset is both necessary and practical to assure the future for a number of our breeds. Is it possible that those who refuse to consider or accept alternatives are guilty of enriching themselves while risking the preservation of the breed(s)? Here I leave you to reflect on a few words of wisdom.

If there is a logical, scientific way to correct genetic health problems associated with certain breed traits and still preserve the integrity of the breed standard, it is incumbent upon the American Kennel Club to lead the way.

—William F. Stifel, President, American Kennel Club 1981

I would add to this "...it is incumbent upon the Parent Breed Clubs and the American Kennel Club to lead the way."



Lisa Dubé Forman Ballyhara Irish Wolfhounds and AKC Judge Iisa@Iisadubeforman.com