

Super-Studs

By Steve LeVan, Lismore Irish Wolfhounds. Original publication in Harp & Hound 2/2012. Uploaded with the author's permission.

In my discussions with other breeders concerning Irish Wolfhound pedigrees, our IW limited gene pool, high coefficients of in-breeding and the negative effect that continual in-breeding can have on any breed; I was told about “bottle-neck sires.” These are sires that impact the breed by the sheer number of times they were used. They restrict our already limited gene pool, not by being the only male available, but by being an extremely popular male used frequently at stud – a “super-stud.”

An issue of perspective quickly appeared within our discussions. Within a particular kennel (or group of kennels with similar bloodlines), using a “super-stud” may not lead to higher coefficients of in-breeding for that kennel, at least not immediately. The “super-stud” may in fact have only limited or distant ancestral connections to that particular theoretical kennel’s gene pool. Of course, when you go back far enough in calculating a coefficient of in-breeding or looking at an ancestral table, you always find IWs to be related at some point in the pedigrees. Captain Graham had only a handful of specimens from which to reestablish the breed. IWs had a limited gene pool right from Graham’s re-start. But if this theoretical kennel only looks at their immediate line and the effect of using a “super-stud,” the breeding may be prudent and a smart move to make. This is the micro view of the breed’s gene pool, limited only to the immediate effect on a small portion of the breed’s overall population. When viewed from outside the perspective of this theoretical kennel (the macro view), the use of a “super-stud” narrows the gene pool of the entire breed – that’s a fact; it’s the undeniable math of the situation. The theoretical kennel may very well discover the macro view when they want to go out again and they find there is a significant chance of going to the get of the “super-stud” or at least having a limited pool of males available that are not progeny of the “super-stud.”

I had Martha Ryan of www.IWPedigrees.com do me a giant favor. She noticed I had been pulling pedigree after pedigree in search of my “super studs.” Responding to her query as to why I was involved in such a dedicated search, I asked her if she could assist and pull a list of all IW sires that produced 12 or more litters including the date of birth of the litters. I took Martha’s product and converted it to an Excel document so I could easily sort and manipulate the data. She asked me to remind the readers that this research is based on data recorded in the database at the time we compiled the statistics. That data is always changing.

Some of the dogs at the top of the list (a tie at 41 litters between Jason of Sunningdale and Boroughbury Justice) were not surprises to me. I had seen them crop up in numerous pedigrees time after time. Some of the other dogs I was not that familiar with. I followed the trail of get from several of the hounds whose names I was not familiar with from their first litter to the present. Several I found, while they had been used frequently, have few or no get (at least in the data base) on the ground today. Several have get on the ground today but only within the limits of a particular kennel or geographic area. Several had been used extensively by one kennel but by no one else (i.e. bred the dog to everything they owned and often more than once). While my research is far from scientific or conclusive, it appears at first glance that just because a dog may be a “super-stud” (used many, many times) does not necessarily mean he will leave a tremendously large genetic mark on the breed. But, that does not mean a “super-stud” will not have an impact. By simply limiting the use of other studs during the

“super-stud’s” period of popularity, the breed is none-the-less impacted (and the gene pool narrowed). In most cases though, “super-studs” directly and significantly impact the breed through their get.

I hope to have the time (and help with the statistics skills – please, I was a music major and pilot) to crunch more numbers concerning pedigrees, in-breeding coefficients, etc. I would love to determine just how many get are in the current gene pool from each of the “super-studs?” In some cases maybe every IW alive. I would like to know the percentage of litters a “super stud” sired during his active breeding years as compared to the total number of litters during that time frame. I also see dogs that were only used a few times but keep popping up in pedigrees I visit. Is it merely a bias in the pedigrees I study or do some stud dogs manage to leave a significant genetic mark without having to be bred over and over again? I have more questions than time, I am sure.

The rationale behind a breeder using a “super-stud” can be diverse and due to multiple reasons: best dog walking the planet, history of producing quality puppies, biggest winner at specialties, ranked number one in all-breed competition, bred back into everything the “super-stud” owner owns, the “super-stud’s” pedigree fits with your bitch’s pedigree, the “super-stud’s” strengths fit with your bitch’s strengths and weaknesses, nothing else of quality nearby and on and on.

Rank	Name	Litters
1	Jason of Sunningdale	41
	Boroughbury Justice	41
3	Ölmühle Anton	40
	Quincy of Kilmara	40
5	Zeno von der Ölmühle	37
	Connel of Nendrum	37
7	Drakesleat Helyk at Ballalyn	36
	Erindale Triston	36
	Zimba von der Ölmühle	36
10	Nutstown King	34
11	Xecel Fionnmae	33
	Shalfleet the King Maker at Ballalyn	33
	Petasmaede Chieftain of Brabyns	33
14	Aron of Nendrum	32
	Fecna of Brabyns	32
16	Eaglescrag Clonroe of Nendrum	31
	Sovryn of Drakesleat	31
18	Brokenwheel Uracil	30
	Eaglescrag Toby	30
	Caio of Eaglescrag	30
	Capitan of Shantamon	30
	Ballykelly Galway	30

I believe it is safe to say the Irish Wolfhound does have a gene pool problem. It’s too shallow to be diving in without thoroughly assessing the consequences. Sometimes the “super-stud” may be the best choice for a breeder based on a blend of the micro and macro views of the situation. But, we breeders need to look deep and hard at other potential stud dogs to see if we may not have overlooked the better stud for our bitch and not based our decision on the “star power” of a “super-stud.”

There are a total of 289 “super studs” in the list I compiled of dogs with 12 or more litters. For brevity’s sake, the top 22 Irish Wolfhound sires are shown on the left.

I have no conclusion from this short study of Irish Wolfhound stud dogs other than I will think long and hard about which dogs I choose to use at stud. I will try to avoid the traps of “stud dog with the most wins” or “stud dog that is only an hour away.” Sometimes using the best stud dog for my

bitch may involve dealing with people I am not familiar with or people I compete with in the show ring. I certainly hope others will think long and hard about their breeding decisions, also. We are all in this together and everyone’s decisions really do affect everyone else if you are in this for the long haul.

The Popular Sire Problem

By Silvan Urfer. Originally published in Harp & Hound 2/2012.

Steve LeVan correctly notes that the total number of litters a particular sire has produced need not be proportional to his influence on the breed. For instance, our most recent complete genetic bottleneck – Sanctuary Rory of Kihone – had “just” thirteen litters overall. His predecessor, Clonboy of Ouborough, only had nine. Nevertheless, both of them are behind every single dog alive today: The last non-Rory dogs I know of were whelped in the 1980’s, though he was behind virtually everything by the end of the 1960’s. Of course, this also means that every single dog in Rory’s pedigree is behind every Wolfhound alive today, even though many of them had just one litter. One non-Rory and non-Clonboy illustration of a bottleneck effect would be Kevin of Ouborough (a bitch), who had two litters and is also behind everything alive today – in fact, she is the third most important ancestor of today’s IW population in terms of genetic contribution to the breed, surpassed only by Rory and Clonboy.

On the other hand, some of the dogs that Mr. LeVan compiled into the table of popular sires are illustrations of heavily-used sires that did not have a universal influence on the breed. Boroughbury Justice and Jason of Sunningdale are particularly interesting examples of this phenomenon: Despite the high number of litters they both sired, neither of them appears in the top 20 individual genetic contributors to the breed. What this tells us is that in order to get to a bottleneck, not only does one need a popular sire, but also one whose offspring are frequently and – more important – widely used.

In the case of Quincy of Kilmara, not only did he sire a large number of litters himself, but he also had widely used littermates and full siblings from the repeat litter (Shadow and Sixpence of Kilmara come to mind), as well as quite a few offspring who became popular sires themselves (e.g. Curoi Jazz and his son, Xecel Fionnmae). These dogs and their offspring did a lot of winning at shows, which tends to motivate many people to use them in their breeding programs. The other crucial factor that allowed them to create a bottleneck was that the dogs in Quincy’s immediate family were distributed through the entire Irish Wolfhound population in a way that made them relatively easily available to most breeders regardless of their geographical location, which has certainly also contributed to the problem.

Now, all of our previous bottlenecks were directly related to very small population sizes: either because Captain Graham did not have a lot of hounds left to revive the breed, or because World Wars One and Two had reduced their numbers dramatically. The impending Quincy bottleneck is fundamentally different from the previous ones in that it is occurring in a population that is still growing exponentially, which it has in fact been doing since the mid-1960’s.

The change (dare I say “paradigm shift”) in breeding practices that occurred around the same time presumably helped in laying the groundwork for the present situation: Previously, a relatively small number of kennels stayed around for a long time and kept relatively closely related, distinct lines that were rarely outcrossed and, when such an outcross occurred, were usually crossed right back into the original line. Short-term inbreeding coefficients were generally higher than they are today, but lines as such were well-defined and genetically quite distinct from one another. In essence, there was more genetic variability available to the breeders in these days, given the number of distinct lines and phenotypes that were around.

After about 1965, we can observe the rise of a rather different approach to IW breeding, where the large kennels that tended to stay around for a long time and maintain their distinct lines were first contrasted, then largely replaced by breeders who did not keep a large number of dogs (which, on a side note, contributed to the reduction in selection pressure) and did not stay around long enough and/or breed in ways that were likely to create anything remotely resembling a line in the original sense: Instead of trying to create or perpetuate a line, this new kind of breeder bought a bitch and tended to take her to whoever was doing well at dog shows at the time. While this approach reduced short-term inbreeding levels in the breed, it also led to a decrease in the variability of phenotypes that used to be associated with the distinct, well-defined lines that had been previously available.

In retrospect, the breed had its next bottleneck coming from the time prevailing breeding practices shifted from line-based to show-based breeding: Another dog who wins a lot of shows and passes on that quality to many of his offspring was bound to come along sooner or later, and when it happened, those who used Quincy and his immediate family gradually put us in our present situation, where most kennels are essentially inbreeding on the same generic pedigrees from a few generations back – and when they are looking for a way out of it, they now find that there is not much left in terms of alternatives.

The above is basically what is happening to the IW population as I write. None of it is particularly new, particularly radical or particularly unique. Bottlenecks due to popular sires have previously happened in other breeds and will happen again in others still. Their negative effects are well-known and well-documented: breeds have vanished before and will continue to vanish because of them. The only question that is left is how many people in our breed will ignore the problem until it is too late.

In their heart of hearts, most people probably know that there is a problem and that something ought to be done about it. Unfortunately, the Wolfhound show scene encourages a culture where such things are just not talked about in public and where, if the problem is ever alluded to at all, Quincy of Kilmara, his siblings and his offspring *Must Never Be Named*. Naming them may not be particularly polite; but then, reality rarely cares about politeness. Realizing that one's breeding program is contributing to the demise of the breed one loves is harsh, yet it is a small price to pay for the breed's long-term welfare. Ignoring this new form of bottleneck event has already severely harmed Irish Wolfhounds by eliminating many of the bases for selection that were available to earlier breeders, and continuing to ignore it will only make the problem worse.

At present, there are still enough breeders maintaining lines that are not subject to our impending next genetic bottleneck – more of them in North America than in Europe. The good news is that the number and diversity of these dogs are considerably more substantial than what was available to Captain Graham or to the breeders who restored the breed after World Wars One and Two. The bad news is that breeding these Wolfhounds to those that are subject to the bottleneck will not prevent the bottleneck and its negative overall consequences from happening to the offspring.

The consequences for breeders with lines that are not subject to the Quincy bottleneck are obvious in that it is their responsibility to save and maintain these remaining lines, and to encourage newcomers as well as established breeders to get dogs from such lines and make line-based breeding choices that ensure that their offspring will remain free from the

bottleneck in the long run. The eventual survival of the Irish Wolfhound breed may very well depend on their ability to do so.

Most breeders who still have lines with pedigrees where Quincy and his immediate family do not occur are probably already making a conscious effort not to introduce them. If you are one of them, it is vital that you continue to do so. Regardless of what you may hear at the ringside, such crosses are by no means inevitable nowadays: There are still plenty of other breeders in the world who are doing what you are doing at this very moment. Doing so may not be the path to short-term glory or to accolades from all your peers – but rest assured, what you are doing is more important for the breed's long-term genetic health than any popular sire ever was and any show will ever be. The dogs will thank you – and in the end, that is really all that counts.