

## What You See Is Probably NOT What You Will Get

by Dave Shewmaker

[dave@shewmaker.com](mailto:dave@shewmaker.com)

[www.shewmaker.com](http://www.shewmaker.com)

*This article is written for the British Homing World Stud Book by Dave Shewmaker, an American racing pigeon geneticist. It contains excerpts from his book Genetics of Racing – Twenty Essential Concepts for Breeding Champions!*

The sport of pigeon racing has many facets. While it ultimately comes down to winning races, race day itself is but a tiny fraction of the time we spend with our pigeons. A considerable amount of our time is actually spent physically handling birds; we select breeders, wean youngsters, basket our team for a race, check out birds at an auction, show our best birds to loft visitors and on and on. It is only natural that we have come to appreciate a good handling bird. We may not all agree on what makes a good handling bird, but almost all of us have a very clear picture in our own mind of a “good handling racing pigeon”.

It is also only natural that we enjoy compliments we receive when others handle our birds or view their pictures.

Unfortunately, this all has very little to do with racing ability and even less with breeding ability.

There are eleven traits which influence racing ability. Each of these traits is genetically defined by the DNA in the bird’s genes. The bird’s environmental history will determine how much of that genetic potential is realized.

1. **Ability to orient** quickly at the time of release AND to maintain the proper orientation on the flight home.
2. **Ability to fly** at a speed and for a duration that is competitive with the rest of the birds in the race. Many sprint birds, for example, just do not have the tools for competing in a long distance race.
3. **Desire to want to get home quickly** (as opposed to just plodding along until it gets there).
4. **Intelligence to resolve challenges** that inevitably arise at some point during at least some races (*i.e.* strong winds or a storm that breaks up the flock and blows them off course).
5. **Ability to learn** from their experiences and their mistakes.
6. **Mindset of a leader** (which is somewhat at odds with their normal gregarious nature).
7. **Willingness to take risks** such as starting for home before the pack is ready or to break from a group during the race.
8. **Stubborn determination to press on** when conditions are tough.

9. **Strongest possible homing instinct** so that it returns home even on races where it gets lost (birds that come home after disasters are able to race another day!)
10. **Ability to recover quickly** for the next race.
11. **Ability to stay healthy** on its own without a reliance on medications.

As you can see, only the second one of these eleven traits lends itself to being evaluated by a physical examination of the bird. For example, shape of the wing, muscle and skeletal structure, balance and other conformational traits are all well understood as they relate to the physics and physiology of flight and could indeed be (at least partially) evaluated by “handling” the bird.

The eleven traits almost certainly do not contribute equally to racing ability. For the sake of our discussion though, let's simplify the situation and say they do make equal contributions. Selecting only on handling qualities would then mean you are placing your emphasis on a mere 9% of the traits influencing racing ability. What you can see when you look at a picture or physically handle a bird, is but a fraction of what is needed to be a champion racing pigeon.

So it isn't that handling traits are without value, it is more that their importance is largely dwarfed by the collective impact of the other “non visual” traits. Making selection judgments based on handling qualities is to ignore over 90% of the traits that contribute to excellent racing performance.

If you want to make progress in the breeding of outstanding racing pigeons, place your selection emphasis on race results and resist the very compelling and natural urge to stock only good handling pigeons!

I will never forget 9438-AU-99-SHEW. I had given a group of youngsters to a neighbor who needed some young birds for his team. On shipping night for the first race of the season he handed 9438 to another club member to put in the shipping basket. I was across the room, but I heard the howl, “Where did you get this?” The question did not have a complimentary tone. It became clear as the bird was passed around that this was one of the worst handling birds the club members had ever seen. After owning up to the fact I had bred the bird, we moved on and got the rest of the birds ready for the truck.

9438 won the race. She won a couple more that season. She dominated the next year's Old Bird season and was the Ace Pigeon for the club. I am sure she would have won many more, but she was killed by a hawk over the next winter.

On her best days, she had almost no muscle and a tail that stood straight up in the air.

Would she have been an even better racer if she had had good handling qualities? Absolutely! The point here is that good handling qualities alone are not enough to make a bird a champion racer and the “non visual” traits that contribute to racing ability are so important that they can completely compensate for a very poor handling bird.

**So again, if you want to make progress in the breeding of outstanding racing pigeons, place your selection emphasis on race results and resist the very compelling and natural urge to stock only good handling pigeons!**

There is another important reason the non-visual traits should not be ignored in your selection program.

No one knows the precise number of genes that influence racing ability in pigeons. I estimate it to be in the neighborhood of 100 genes, though it really could be many more. For many of these genes, there are several different versions (known as alleles) that exist in the racing pigeon gene pool. Some of these alleles enhance racing performance and others detract or are neutral. It is the actual set of alleles a pigeon inherits that determines its genetic potential for racing.

The number of possible combinations of these “racing alleles” that can result from the mating of any two unrelated birds is huge. The precise number will of course depend on the specific genomes of the two birds, but it is well beyond millions of possibilities.

It is this tremendous number of possible outcomes that gives rise to the very common situation where two excellent race birds do not produce good racing offspring.

There are some simple steps though that a fancier can take to dramatically improve the racing quality of the youngsters they produce in the breeding loft:

1. Recognize the relatively minor contribution (less than 9%) handling traits have in overall racing and breeding potential and make this the last consideration when selecting breeders.
2. Make race results the primary consideration in choosing breeders.
3. Try to avoid placing birds in the breeding loft that were “bred for stock”. There are situations where this needs to be done of course, but do it sparingly. Every mating has a theoretical bell curve which represents the racing ability of the offspring that particular mating can produce. Without the benefit of race data, we have no idea where on that bell curve our “bred for stock” bird sits.
4. Value most highly, results to a single loft. Winning 1<sup>st</sup> place against 10,000 birds is a magnificent achievement, but it is the data for races to a single loft that have the most value in sorting out outstanding race performances that are due to genetic superiority. This is because all of the birds racing to a single loft have experienced a common environment and so the results tend to be due more to genetic differences.
5. Evaluate potential breeders on the basis of their overall race record, not a single race result. Single outstanding race results can not be trusted. Was the achievement of that one race due to luck, environmental factors or superior genetics? We will almost never be able to get an absolute answer to this question based on a single result. If we get a second notable achievement though, we can probably rule out luck. If we get a third such notable achievement, then the odds are sufficiently great that we can reasonably assume there is a genetic factor in play. Of course, the more notable achievements a bird has, the more confident we can be in that assessment.
6. Look for patterns in your race data. Common ancestors can be a clue to prepotent breeders. Multiple relatives with noteworthy race records tends to validate that their race performances had a genetic basis.
7. Be brutally selective in the birds you retain for breeding. Try to limit your selections to the top 2% of your racers. There will always be occasions where you will make exceptions, but 2% is a good guideline.
8. Cull hard. Breeders must be given a fair chance to demonstrate their breeding value, but once they have been given that chance and they have not distinguished themselves (meaning significantly above the standards for your loft), they need to go. Two breeding seasons with two different mates is quite sufficient.

Pigeon racing is a hobby for most of us. As such, we should enjoy it. There is nothing that says we must all do it the same way. If you enjoy a good handling pigeon and want to make that a cornerstone of your loft, then by all means do it. The point of this article is not to say you should ignore handling qualities, just that you understand their overall role in producing race winners and then proceed according to your own situation.

In closing I would like to share one of my all time favorite pigeon stories.

Years ago I was told about two ladies who raced pigeons but who came in near the bottom of the race report week after week, year after year. Someone finally asked them why they kept sending their birds to the races. Their answer was for me a simple but elegant statement of what the sport is all about; “We love our birds. We look forward to race day when we sit out on the deck, have our tea and watch them come home”.