

BREEDING

Pedigree Analysis



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MODERN SPEED GENES

In *The Blood-Horse* of Sept. 7, page 22, we featured an article about the so-called "Speed Gene," and speculated a possible genetic trail back through the generations for the revolutionary speed variant (C:C) to the foundations of the breed in the 1700s. This time the focus is on the Speed Gene as it exists in America today.

The best statistical tool for this is a stallion's progeny average winning distance (AWD), which can be found in The Jockey Club Information System's statistical summary on *The Blood-Horse's* Stallion Register online. This, combined with the stallion's own aptitude, provides us with a fair guess at his genetics. For instance, we know Speightstown, a champion sprinter, tends to sire sprinters, and his progeny's AWD of 6.45 furlongs reflects that, although he's had a few that can go longer, such as 2012 Travers Stakes (gr. I) winner Golden Ticket. Combined with his typey conformation and ability to sire precocious juveniles, this strongly suggests that he's a C:C, the sprinter speed variant.

On the opposite end of the spectrum, the irascible Dynaformer

proved a top sire of stayers, with an AWD of 9.06 furlongs. There have been a few good juveniles by Dynaformer, including Barbaro, but the ones that ran well early usually made their impressions at a mile or longer. Later maturity, with talent kicking in as the distances lengthen, is typical of the T:T genetic combination.

Given these parameters, it would seem that what falls between should be easily stamped with the C:T genetic combination, but it's not that clear without genetic testing.

We noted previously that Secretariat looked like a sprinter but ran like a stayer, and it's very likely he had the C:T combination that allowed him to do anything he wanted. Secretariat proved a great broodmare sire, with daughters producing three important grandsons—Storm Cat, A.P. Indy, and Gone West—pillars of our current gene pool.

Storm Cat was by Storm Bird out of Terlingua, by Secretariat. Lengthy and heavily muscled, he was one of the best juveniles of his crop and won from six furlongs to 1 $\frac{1}{16}$ miles. As a sire, Storm Cat was noted for getting two different

types, the stocky sprinter type and a lankier model that could run into the middle distances.

Storm Cat's progeny AWD is 7.08, compared to that of his sire, Storm Bird, 8.35, indicating Storm Cat was much more of a speed influence. We know he hailed from a female line devoted to sprinters through Terlingua, Crimson Saint, and Bolero Rose. The evidence suggests Storm Cat carried the C:C variant, passing on his speed consistently, but because he was bred to a lot of top-class mares with more stamina to balance him, such as the router Mariah's Storm, he could also sire C:T runners such as her son Giant's Causeway.

A.P. Indy, by Seattle Slew out of Weekend Surprise, by Secretariat, was also good at 2, especially at the end of the season. He was Horse of the Year at 3 and won from 6 $\frac{1}{2}$ furlongs to 1 $\frac{1}{2}$ miles. His progeny's AWD is 8.25 furlongs, compared to that of his sire Seattle Slew (7.71), and he is not noted for siring precocious juveniles, which suggests that A.P. Indy is more likely a T:T.

Gone West, by Mr. Prospector out of Secrettame by Secretariat, is harder to figure. A winner at 2 over seven furlongs, he won out to nine furlongs at 3. His sire and grandsire, Raise a Native, were the quintessential fathers of precocious speed, which goes back along their male line to Phalaris.

Gone West sired a lot of good 2-year-olds and sprinter/milers, but a surprising number won at 12 furlongs, such as Commendable, Johar, and Lassigny. Gone West's progeny AWD is 7.55, suggesting that although he looked like a sprinter, he may have carried the more versatile C:T combination.

The progeny AWD of six-furlong specialist Mr. Prospector is a surprising 7.17. Because Mr. Prospector was known as a sire of precocious sprinters, this is unexpected, but a review of his best shows that when bred to speed, he tended to sire speed, and bred to routers, he tended to get routers. So instead of being the expected C:C combination, he was probably a C:T.

Which brings us to Northern Dancer, which the "Speed Gene" researchers suggest is the horse that pushed the C-allele around the world. A little, muscle-bound horse, Northern Dancer proved his stamina with his Kentucky Derby and Queen's Plate wins, and his sire record underlined that point. He was probably a C:T, and while his sons varied, best guesses are that Nijinsky II and Sadler's Wells were T:T, and Danzig and Storm Bird were C:T.

It will be interesting to see which stallion farms in Kentucky decide to have their stallions genetically tested and clear up the muddy waters once and for all. **BH**



Storm Cat's progeny average winning distance is 7.08 furlongs

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