

APPLIED APPALOOSA COLOR GENETICS

Part II: the few-spot leopard

By Robert Lapp and Gene Carr

Imagine yourself as an Appaloosa breeder back in the 1960s. It's early spring, the calves are hitting the ground—but you're anxious about something else. Your blanketed mare, bred to a nice leopard stallion that was a regional award-winner last year, is close to foaling. Your hopes are high; you saw some of his colored babies in last fall's futurity.

It's early morning. The horses are gathered near the gate waiting for breakfast, but one is missing. Your mare is by herself far back in the pasture. You can't see any baby but you just know the time has arrived—and your walk quickens.

The mare isn't grazing. She's just standing there, looking ahead and then down toward the ground. She whinnys as if to announce something, and then you see it and think, *What's this? It's nearly all white. Where are the spots? And a stud colt to boot.*

You're more than a little disappointed. Baby is up now and moving closer to

Mom as you ponder, *What am I going to do with "this"? No stallion potential for sure, and who wants a white gelding?* (see photo A).

Fast-forward to November 1972. You open your newly arrived *Appaloosa News* and while thumbing through the pages, a picture catches your eye. It's a nearly all-white horse—a spittin' image of the baby you gelded the decade before and sold at public auction. Above the picture in bold type is a caption with words neither you nor anyone else had ever heard or seen: "Few-spotted leopards."

You ask yourself, *What's that?* and start reading the story, wondering how a "leopard" can have only a few spots.

A GENETIC BREAKTHROUGH

Our co-author, Gene Carr, wrote that article and described what was completely unknown years ago on that early morning out in the pasture. After 12

years of research and study, he coined a strange new word and introduced Appaloosa breeders to a new coat pattern description—the few-spotted leopard: an Appaloosa with leopard parentage but only a few spots. He said these horses had produced leopards and other coat patterns with striking color contrast, nearly 100 percent of the time (see photos B and C).

You read on, but are skeptical. Nearly everyone regarded a "white" horse as a misfit or cast-off, a genetic mistake having little or no market value. Many, if not most, colts were gelded, although the few that were kept as stallions prompted little interest from breeders. An Appaloosa with such coloration (or lack thereof) fit the prevailing belief, which was more an uninformed genetic assumption: If a nearly all-white horse had no spots, it couldn't produce them; it was a plight to be suffered until the next breeding when hopefully, you'd have better results.

FROM WHITE TO BRIGHT

Misunderstood at the time, this “white” Appaloosa was actually a storehouse for yet-unborn color, but nobody knew it or thought to take a closer look.

Not long after publication of Gene’s article, and despite continuing skepticism, a few Appaloosa breeders took heart and built their programs around few-spot leopard stallions. One stallion ad in particular captured the flavor of the times. It told the whole story of the few-spot’s genetic coloring power in only a few words.

The breeder’s ad included an interesting statement: “Does a white horse turn you off? Me too, really, because I like spots. But, what do we expect of a stallion? To sire foals with halter conformation, athletic ability, disposition *and* color.

“It’s well known now that few-spotted leopards (almost-white horses) sire nearly 100 percent color from all mares. The

more brilliant contrast of color is on foals from solid mares. So, if a white horse turns you off, fear not, for you aren’t likely to get one.”

Co-author Robert Lapp got to know this advertiser—who died recently—while writing about few-spotted leopards in the late ’70s. The breeder was generous enough to send many pictures of highly colored foals—all by his stallion crossed primarily on solid-colored Appaloosa and Quarter Horse mares. Along with only a handful of others, following publication of Gene’s tradition-breaking article, he added more evidence to our understanding of Appaloosa color genetics, and especially the few-spotted leopard.

As more breeders began using few-spotted leopard stallions and mares, stories detailing their results appeared in *Appaloosa News* and the rest, as they say, is history. (see photos D and E).



Photo A



Photo B



Photo C

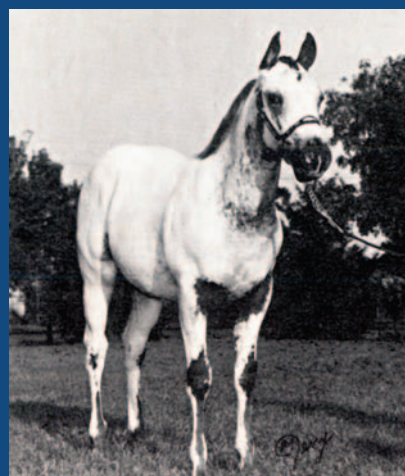


Photo D

FYI: ApHC registration terms

By ApHC Registrar Shonda Nelson

The terms “leopard,” “few-spot leopard” and even “near-leopard,” “near-few-spot leopard,” “no-spot leopard,” “peacock leopard,” “heavy leopard” and “light leopard” are commonly used in the Appaloosa industry. However, because of the difficulty in defining a leopard and the differing opinions within the equine community, the Appaloosa Horse Club does not use these terms when describing Appaloosas for registration purposes.

In fact, leopards, or few-spot leopards are not even described as “white” horses with colored spots or colored roaning. The majority of these horses are born with varying amounts of dark patches, or roan hairs in various points on their bodies. For Registry description purposes, you should determine the base color of the horse from the dark spots, or roan hairs. The Appaloosa coat pattern is the “white” or “white with spots” that covers the horse’s body. Sometimes, the

white Appaloosa coat pattern is large enough that it can be confused with a truly white horse, and the correct base color is difficult to distinguish.

For example, a few-spot leopard born with bay roan patches and bay spots should be described with a base color of bay roan, and an Appaloosa coat pattern of “white over entire body with few bay spots.” Because the horse was born with dark-colored patches and spots, the base color of the horse is not white, even though the horse may continually roan as he ages until he appears to be all white.

The Registry’s classifications of Appaloosa characteristics, anatomical locations of possible Appaloosa coat patterns, face and leg markings, base colors, and seven commonly used terms for Appaloosa coat patterns are located on our web page at www.appaloosa.com, under Registrations and Guide to Identifying.



Photo E



Photo F



Photo G



Photo H

PASS THE “WEBSTER’S,” PLEASE

What, then, are few-spotted leopard Appaloosas? Why are they called few-spot leopards? What are their visible and defining characteristics? And how would I know if I really had one?

The few-spot is basically a nearly all-white Appaloosa having varying amounts of dark patches or roan hairs located at various points on its body. It may have only a few spots—sometimes only one or two, sometimes none—but a few more are possible. It must be the product of an Appaloosa-to-Appaloosa breeding with at least one leopard parent somewhere in its pedigree. More often than not, however, the leopard appears in the first, second or third generation.

Contrary to what was earlier thought, producing a bona fide few-spot doesn't require an immediate leopard parent or a high concentration of leopard breeding. Few-spots don't develop their “spots” or dark patches later in life. They're born with them, although the markings may roan with age to the point of being barely visible.

The pattern was originally labeled a few-spotted leopard by Gene, and was intended to describe a horse's color pattern. Nowadays however, the words few-spot or few-spot leopard are quite common and appropriate, even when they refer to the horse by saying, “It's a few-spot.”

While not common to virtually every few-spot, the following characteristics occur in various combinations and represent the defining phenotypic (visible) indicators of a legitimate few-spot leopard pattern (see photos F, G and H):

- A few spots, usually found on the underside of the belly, on lower portions of the body or, often, near the knee or hock
- Leg patches, sometimes extending above the hocks and/or knees
- Dark hair or splotches behind the elbow, and on the flank just ahead of the stifle
- A dark mane/tail or dark hairs scattered throughout the mane or tail
- Dark patches or roan hairs on the underside of the neck, usually extending to the throat

- Usually dark, but sometimes white-tipped ears
- Dark or roan partial face markings
- Mottling mixed with dark hairs around the muzzle, although the mottling may be only slightly visible on some few-spots
- The size and location of the dark-colored areas can vary significantly on any given animal

While these visible characteristics define the few-spot leopard coat pattern, we're intrigued by what appear to be “anomalies.” We know of past and current stallions that appear to be completely white. Although we haven't seen these Appaloosas live and up-close, very good pictures from different angles seem to indicate they have none of the characteristic few-spot markings.

We're continuing to investigate these Appaloosas because they have been and are currently advertised as few-spot leopards. One critical note: Their pedigrees and production records have already been examined and fit quite clearly the most basic requirements for identifying a few-spot/ homozygous Appaloosa: They have Appaloosa x Appaloosa parents, a leopard pedigree and 100 percent color production.

A quality few-spot leopard, misunderstood in an earlier era, has now become a much-sought-after breeding animal. Considering the ApHC's new show eligibility rules and ongoing difficulty of producing colored foals consistently from non-characteristic Appaloosas or cross-bred animals, that nearly white foal we saw one early morning out in the pasture can now be greeted with, “Wow—I've got a few-spot!”

Editor's note: Last month in Part I, Robert and Gene addressed nine myths of Appaloosa color genetics.

Next month in Part III, they'll talk about the snowcap Appaloosa pattern.

Be sure to watch for our companion articles later in the year featuring the latest in lab-based research involving Appaloosa genetics, including color and night blindness. 🐾