Palmetto Het (Heterozygote)

Most Commonly Used Name: Palmetto
Mode of Genetic Inheritance: Recessive to Wild-type
Morph Type: Simple recessive gene mutation
Eye Color: Black pupil and *dirty* white to silver iris
Price: $2,000.00 usd

NOTE: Male heterozygote and homozygote Palmettos will begin selling in 2015, and only 2015 hatchlings will be sold. Our marketing strategy of selling only female Palmettos until 2015 is practiced toward the goal of ensuring everyone that no one person will have the advantage of acquiring a male Palmetto before anyone else. Continuing that logic, 2016, we may sell a few 2015 yearlings, and after 2016, perhaps Adults can be purchased, but until then, everyone who owns a Palmetto is essentially on an even playing field with all other Palmetto owners.

Until 2015 or later, no Het or Homo Palmetto males will be sold, traded, gifted, or otherwise leave SMR. Pictured is a typical specimen of corn snake that is Het for Palmetto (having one copy of the mutation and therefore do not have the appearance of the Homozygote/visual Palmetto). Virtually 98 out of 100 are relatively tan-colored (compared to classic corns) and below the sides of the markings, colors tend to diffuse. It's amazing how little variance there is between Het Palmettos. Few corns (if any) have demonstrated such a static phenotype for the genotype of a corn with only one copy of the Palmetto Mutation; HETS. Some of our Het Palmettos are also het for other color mutations, but because they are the products of Palmattos X Het Palmettos, the only het mutation we guarantee is that of the Palmatto Mutation. Other mutations that could be in the Het Palmettos include; Amel, Anery, Charcoal, and Stripe. Suffice, the Het Palmetto you purchase will look similar to the picture above and will look nothing like the mostly white *visual* Homo Palmetto pic'd elsewhere on our web site.

Palmetto Corn snake History:

Status of the Palmetto in the marketplace:
The adult male we have that was captured in the wilds of South Carolina in 2008 is the only one known to ever have been collected in the wild, and none have been produced in captivity until now. In 2010 we produced several heterozygotes. In 2012, we bred several of the hets together and back to the wild-caught adult male patriarch.
Ten homozygote (aka: visual) Palmettos were sold in the U.S. and Europe in 2012 and including our stock, no other Palmetto corns exist anywhere in the world.

How the Palmetto Corn Snake got its name:
A perfectly natural trend exists in herpetoculture toDAY to sometimes hastily assign *hopefully unique* names to newly-discovered mutations, morphs, or traits, but in the haste that often drives such assignments – *usually via desire to be the first to name the new morph* – insufficient consideration is given to the potential that some of the phenotypes of the new morph may not have immediate and parallel association with the new name. Historically, in our hobby, upon reading the name of a new corn snake morph, one should conjure a mental expectation before seeing it, and if that expectation is met, the morph name will usually be successful in the marketplace. Because of the highly colorful nature of corn snake mutations and their selective variants, namesakes are usually colors, fruits, or candies. If the person naming the morph did his/her homework, the chosen names are accurate most of the time, but sometimes, it is discovered that not enough individuals were examined prior to naming. This can result in the new morph name not accurately reflecting the appearance of most members of that morph. In the absence of a regulating entity governing such name assignments, and because patents are not granted for corn snake morphs, anyone can assign names to corn snake morphs that they discover. As it usually is with any product, success is ultimately dictated by the consumers. If they like the name, it sticks. This is notably demonstrated when two or more people producing the same morph have assigned different names to it. One of those names usually wins out over the others, but there are cases where more than one name applies to the same morph, and

a *descriptor* denotes the genetic family (usually the name of the respective gene/trait discoverer).

I labored over many names I thought were befitting this unusual and stunning snake, but most were already assigned to other corn snake morphs. Keeping in mind that descendants of the wild-caught male may not have his general phenotype, I was dubious about using a color, pattern, or familiar and commonly recognizable appearance namesake. Therefore, I abandoned the visual namesake convention – in favor of a name that did not require a mental or visual association. Of course, the name Palmetto is associated with the state in which this snake was captured; South Carolina (aka:*The Palmetto State*).

How can you be sure this is a corn snake, Don?
In the absence of DNA testing, it's not possible to make a 100% positive genetic identification, but there are enough markers for me to say it is a pure corn snake. Most reptile mutants have features that are anomalous to their nominate forms, and such anomalies can be beyond the obvious habitat ranges and color & pattern features that normally distinguish them. Of course, not unlike the Leucistic Rat Snake that lacks any color or pattern resemblance to its species phenotype, the color and pattern of the Palmetto looks nothing like ANY snake species. Other than telling you that this snake was viewed by many corn snake keepers and breeders at one or more reptile shows prior to acquiring it, and was thoroughly and painstakingly photographed by Bill Love of Blue Chameleon Ventures, I have closely compared the Palmetto's anatomical features to those of Corn Snakes (Pantherophis guttatus) and the only U.S. Rat Snakes found where this one was captured – (Black and Yellow Rat Snakes; *Pantherophis obsoletus obsoletus* and *Pantherophis obsoletus quadrivittata*). In that those are the only two U.S. Rat Snake species that naturally occur in the vicinity of where the wild-caught male was captured, all Rat Snake references hereafter in the Palmetto morph discussion refer collectively to Black Rats and Yellow Rats – unless otherwise noted.
The Palmetto's anal plate is divided like both Corn Snake and Rat Snake species, dorsal and lateral scales that are keeled conform more to Corns than Rat Snakes (even though scale keeling is variable in captive-bred individuals of both species), the larger radius of The Palmetto's ventral keel is like that of the Corn, vs. the sharper ventral keel of the Rat Snake,

facial scales are generally shaped more like a Corn than a Rat Snake (count ranges are essentially the same for both species), and the Palmetto's 70 subcaudal scale count barely overlaps the 63-90 count of the Black Rat Snake (not rare), but is well below the 75-102 count for Yellow Rat Snakes (*P. o. quadrivittata*) – thereby largely eliminating the Yellow Rat Snake as a genetic donor. Bear in mind that other than average adult size and DNA comparisons from reliable baseline samples, the primary distinction between Corn Snakes and the SC Rat Snakes is in the realm of appearance (color and pattern schemes), so when a mutation dramatically deviates from a species' appearance standards, cousin species like Corns and Rat Snakes are sometimes difficult to differentiate. Since temperament can be respectively anomalous in either of these species (some corns may perpetually bite and some Rat Snakes can be reliably friendly to humans), it is not reliable to attempt distinction in this realm. Distinguishing between two species that have similar scalation can sometimes be challenging, since they may overlap each others' scale-count ranges (as is the case here). Likewise, exceptions in the realm of size in either species is inherent in both Corns and North American Rat Snakes (there are adult Corns larger than the average SC Rat Snake and vice-versa). Based on these observations, in my experienced opinion (and that of several other veteran Rat and Corn Snake keepers), the Palmetto is a corn snake. It may well be the first leucistic-type mutation to be discovered in corns; albeit historically unusual-looking for a leucistic serpent – with its predictable color flecking, never seen in North American Rat Snakes. Until we see more examples of Palmettos, we will not know the general appearance of this morph, but so far (as of July 8, 2011) the five F^2 visual Palmettos are remarkably consistent in appearance to the original patriarch (above pictured adult). The eyes certainly are like most leucistic serpent mutants, as is the predominant white scalation. Many Leucistic Rat Snakes have one (or a scant few) "smudges" of color on them, but far fewer than the first five captive specimens exhibit, and those color anomalies are generally much smaller than seen on this Palmetto. It is rare to see more than one or two such color smudges on Leucistic Black or Texas Rat Snakes, and as you can see on Palmettos, there are dozens (if not hundreds) of scales that have deeply defined colors AND far too many color smudges like the few that are seen on some Leucistic Rat Snakes. Among the many hundreds of Leucistic Texas and Black Rat Snakes I've produced and many more that I have seen in the industry, I estimate that only one of every ten of them have color anomalies (smudges), and at least three times rarer are ones that have more than one

small color smudge.
Hatchling Size:
The second clutch of eggs that hatched in 2011 yielded the following length and weight vital statistics:

Palmetto Hatchling # 1 = 9.2 in (23.4cm) and 5 grams
Palmetto Hatchling # 2 = 8.7 in (23.4cm) and 4 grams
Palmetto Hatchling # 3 = 8.9 in (22.1cm) and 4 grams
Palmetto Hatchling # 4 = 9.2 in (23.4cm) and 4 grams
Palmetto Hatchling # 5 = 8.8 in (22.4cm) and 4 grams
Palmetto Hatchling # 6 = 9.2 in (23.4cm) and 4 grams
Normal – Heterozygote Hatchling # 7 = 9.3 in (23.6cm) and 4 grams
Normal – Heterozygote Hatchling # 8 = 8.2 in (20.8cm) and 4 grams
Normal – Heterozygote Hatchling # 9 = 9.4 in (23.9cm) and 4 grams
Normal – Heterozygote Hatchling #10 = 9.0 in (22.9cm) and 4 grams
Normal – Heterozygote Hatchling #11 = 8.6 in (21.8cm) and 4 grams

As cited above, all are slightly under the average size for a hatchling corn snake and far below the averages for most SC Rat Snakes. Regarding the likelihood that the wild-caught Palmetto being a hybrid of Corn Snake and Rat Snake, I'm not seeing any indication of it. Most colubrid inter-species hybrids have what we call HYBRID VIGOR where progeny of such hybrid pairings display robust size and vigor. Every single hatchling Palmetto so far not only lacks HYBRID VIGOR, but is smaller than virtually any corns I've EVER hatched.

Important Note:
These images are not renderings of the actual animals being offered, (except for uniquely offered snakes found in the SURPLUS section of this web site). We do not provide pictures of individual hatchling snakes for sale, nor do we recommend that you ever choose a new pet based on an image of its neonatal form. Corns change so dramatically from hatchling to adult, they will NEVER have the same colors or contrasts throughout maturity. While most of the snakes we produce will mature to resemble the featured adult image(s) on our web

site, unlike manufactured products that are respectively clones of each other, the nature of polygenic variation results in each animal being similar but not identical to others of its morph. The snake we select for you may not mature to be identical to the pictured examples, but will be chosen based on our experience of observing which neonates will mature to properly represent their respective morph. We take this responsibility very seriously, and therefore publish the guarantee that we will exchange your SMR snake if it does not mature to be like our advertised examples.

UPDATE regarding Het Palmettos, March 31, 2014 per S.O.T.D. 03-31-14

After noting that most of the Palmetto Hets have a phenotype that is decidedly not like that of wild-type corns, I agree with Vin Russo's and Rich Hume's observation that the inheritance of the Palmetto mutation is likely *incomplete-dominant* to wild-type. This is not uncommon in white snakes (i.e. Leucistic mutations) of other species for their