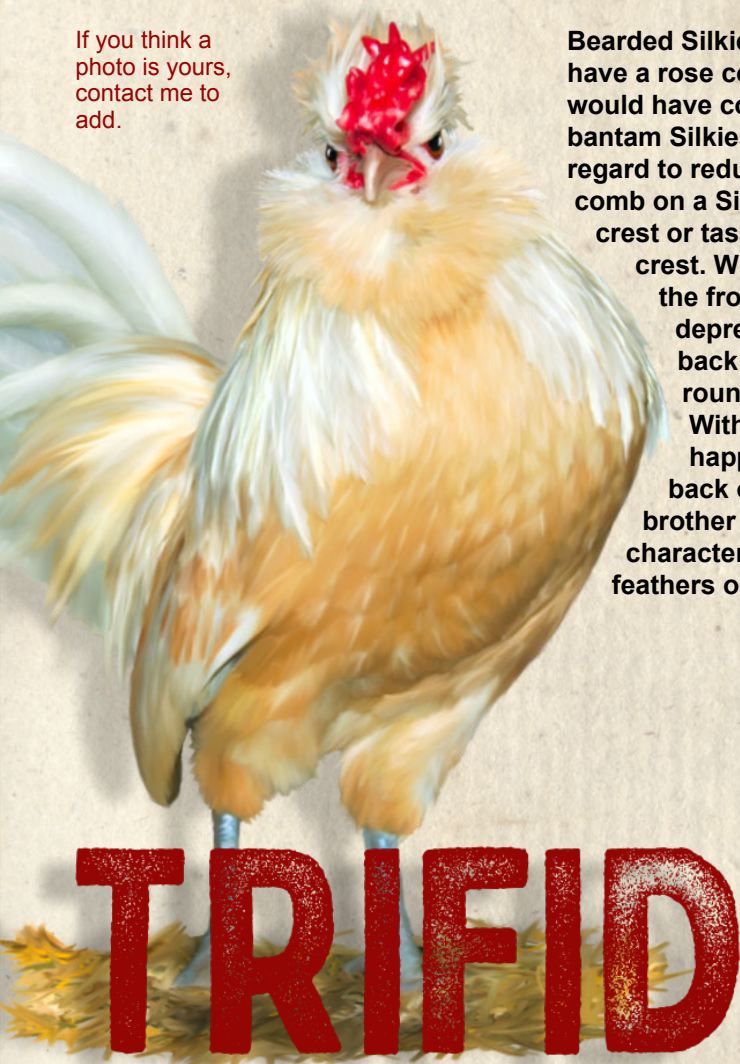


ROSE COMB CREST COLLISION

Text & photos: Sigrid van Dort
Photos others too.

If you think a photo is yours, contact me to add.



Bearded Silkies have a walnut comb (pea x rose). Silkies without a beard have a rose comb. How those peas ended up in the Silkies, no idea, or it would have come from a cross to Brahmas in Europe when large and bantam Silkies were created? The result accidentally worked out well with regard to reducing the wattles in the beard. Because of the crest, any comb on a Silkie will not look 'normal' as it does on chickens without a crest or tassel (mini crest). This is because the comb collides with the crest. When single comb, you will then get a kind of crumple zone at the front of the comb. With a rose comb, there can also be a depression on 1/3 because of the comb collision. However, the back will not look 'normal' either, regardless of whether a rounded comb end (Wyandotte) or one with a spike (Hamburg). With a rose comb on an unbearded Silkie, something special can happen: TRIFID! Trifid is three protrusions (three thorns) on the back of the rose comb, it occurs in Watermaalse and it's rumplless brother Bosvoordse bearded Belgian bantams and is a 'breed characteristic'. Unsurprisingly, these bantams have a small tuft of feathers on their head, a mini-crest or tassel.



COMB SHAPES:

- ... + single comb
- D duplex, split (lengthwise)
- D^V two horns comb (or leaf comb on Houdan)
- R rose comb
- P pea comb
- R/R P/P walnut comb

On the left a single comb bumping into the crest on the right side an impure rose comb in same event.



A Silkie cock of 1936 and one of 2011 from internet. The first has a rose comb, the second too only half, you can tell this from the broad smooth basis. Both have comb thorns.

One of the 'blessings' of the walnut comb was shrinking of wattles. Good for bearded chickens, less so for unbearded of course. At shows, judges don't care much about wattle size in unbearded Silkies, at least in Europe. Perhaps it costs a few points, however the wrong comb on the head never results in a DQ (disqualification), perhaps because there is too much going on in a Silkie by default? Imagine a Wyandotte with a single comb instead

of a rose comb, then it isn't a Wyandotte anymore, is it? Alright... we're not talking about consistency.

Confusion on comb type might be because of the unclear description in the standard where a walnut comb is asked (in shape, or any other roundish description) and when a pea comb is added and the wattles shrink by pea comb anyway, a beard isn't needed to get rudimentary wattles. Those are seen frequently in unbearded EuroSilkies and it is so.... weird. What do you think of the two buffish Silkie bantam boys on the right? A 'wrong' e-allele is not the point here (eye-roll)...

In the scope of this article, the rose comb is the actual subject because strange Things happen when you put a rose comb on a crested or tasseled chicken.... Horror & suspense: the Trifids are coming! Wait, what? You mean the man-eating plants? That's written with two f's. Triffids. Okay, that's a relief!

What is trifold and how come?

Rose combs on crested chickens give 'trifold' rose combs. Now what is trifold? Is it a separate gene or what? First some valid history because without substantiation of the Ones who can Know (geneticists), what is written is just another Breeders Latin tale. To explain a bit of historic findings, they did actual test breeding, lots of birds, then noted what combtypes came from F1 and F2.

In order of appearance, who stumbled on the trifold rose comb, thanks to a recap from Dunn and Jull: Bateson, 1909; Bonhote, 1911 - yes that long ago! Cunningham, 1912; Punnett, 1923 the man from the Square for calculating percentages of traits in offspring. Dunn & Jull, 1930 and finally Hutt, 1949.

Trifold rose comb is the original Silkie comb

(Dunn & Jull, ± 1930) When Dunn and Jull were doing their Silkie investigations, Silkies didn't have a beard yet. Silkies had a rose comb and wattles belonging to the rose comb as in any other breed. Dunn & Jull crossed a recessive white Silkie male with a large strawberry-shaped comb ending in two posterior



Buff kids on the block, German Silkie bantams, one with rose comb and the other with pea in it, look at the wattles and compare with the guy below.



points X 5 single combed (dominant) White Leghorn females.

Dunn & Jull on multiple point rose comb versus single point:

"The Silky rose comb, however, differs from the normal rose comb as found in such breeds as the rose-combed Leghorns and Wyandottes in several details of form. The comb of the Silky is fleshier in the anterior parts, is shorter, and ends rather bluntly posteriorly in two or more points or papillae, whereas the ordinary rose comb is longer and is characterised by a single long posterior spike or point. Bateson

(1909) describes the Silky comb as rose plus a trifold element, but I am inclined to agree with Cunningham (1912) that the more important characteristic of the Silky comb is its abbreviation and bluntness, the more so since it is not regularly trifold but may show from two to four or occasionally more posterior points. The number of posterior points in the Silky type of comb is generally visible in the newly hatched chicks, and on most of the F1 (single x rose) chicks 2 or 3 posterior points were noted. However, this distinction cannot be made with complete accuracy because occasionally no posterior point is visible in young chicks. As the



Van Gink (NL) drew the Silkies of his time.



First with thorns, later with one and then without. Fashion in chicken breeding plays a large role, or the loudest voices?



Above: an impure rose comb R/r+, the basis is single comb, top is rose comb and you see Trifid. F1 cross naked neck x Silkie. The wattles tell you the Silkie was rose comb. Large showgirl in the making.

F1 chicks became mature, however, it was observed that all had combs resembling the silky type. The number of points could not always be determined, since in some birds the comb was blunt posteriorly and covered with many small papillae. In the majority of cases (26) three points were plainly discernible, in 11 cases two points were noted, while in 5 cases the number or points could not be counted. In none of the F1's, however, did the simple single-point rose comb appear."

On the influence of the crest on rose comb

"In the F2 and back-cross chicks, the appearance of the multiple-point condition was obviously influenced by the presence or absence of the crest. This point was especially noted by Dr Jull in the chicks produced by his crosses of F1 males with single-combed Brown Leghorn and White Rock females, and is being further investigated by him. In general he found that all rose-combed crested chickens had multiple comb-points while of the uncrested chickens all except a few doubtful exceptions had combs with only one posterior spike. This association, which appeared

also in the F2 and back-cross chickens reared at Storrs, has been observed by other investigators, notably Cunningham (1912) and Bonhote (1911) who suggested that the truncated trifid condition of the rose comb is probably due to the crest. This possibility will be discussed further under the section on association of characters. It is only necessary to state here that (1) the typical single-spike rose comb appeared in several F2 uncrested chicks, indicating that the multiple point and shortened condition may be due to the crest; (2) there is no evidence either in our own or in other reported data that the truncated or multiple-point condition of the rose comb is inherited as a separate character."

"Crest and comb form.

In addition to the genetic association (or lack of it) between these characters one other association of a possibly different type was noted, i.e. that between the crest and the truncated, multiple point condition of the rose comb. The total data on this association are given in Table V - the expression "points" being used to indicate the truncated multiple point condition of the rose comb, and "one



Photo from the article of multiplex combs. This is R/r+ too, so different.



Rose comb with quadrifid, also F2 as the one above. Rose combs are not boring. Getting it right can be a problem.

spike" indicating the usual (Wyandotte) type of rose comb. Only rose combed progeny are included in the tabulation, since the truncated multiple point condition was observed only in rose combed birds*.

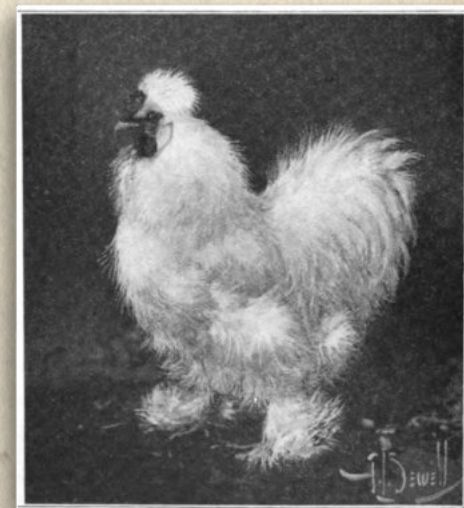
*) It is possible that an analogous condition may occur in single-combed fowls since several single-combed crested males (F2 and back-cross generations) had lop combs, occasionally with posterior side sprig. Our descriptions of the single combs are not complete enough to allow analysis."

Hutt recaps on the rose comb and trifid in 1949:



"In Silkies the comb is like a short rose comb broken up at the posterior end into two, three or more points. From the fact that in F2 generations from crosses Silkies x single combs there appear normal rose combs as well as trifids (Bonhote, 1914; Cunningham 1919, Punnett, 1923) it is clear that the Silkie comb is rose. Punnett suggested that the shortening of the comb may be caused by the crest but that the trifidity probably resulted from

another gene. However, in progeny from Silkie crosses the trifid comb is usually found in crested birds, and the normal rose comb in non-crested ones (Cunningham, 1912). Among 545 descendants from Silkies, Jull (1930) found only 12 exceptions to this rule. He concluded that crest modifies a rose comb to the trifid condition and that his 12 exceptions were errors in the classification. It must be recognized, however, that crest is not always associated with



Above, 1924 Robinson, white Silkie cock.

Left: also Robinson, black pair.

Below: an English rose comb on a Silkie cock. There are so many shapes of rose combs... You'd almost think they are different combs. And yes, even on this model, little spikes are possible.

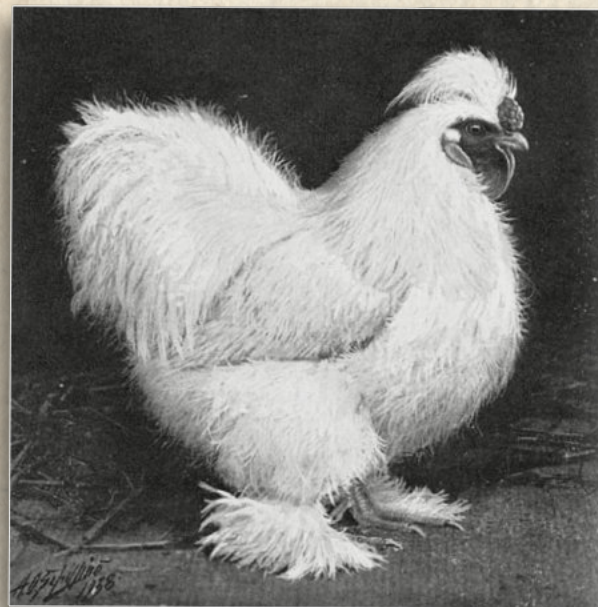
In the folds and holes, sebum can accumulate that looks like kernels. You can pick those out.

trifid comb in such matings, for the exceptions of Cunningham (1919) showed that the normal pointed rose comb could occur in birds with small crests.

In a side note Hutt suggests that trifid is independent of Duplex. The multi-point or trifid comb differs from bifurcated (two forked) combs caused by the duplex gene in being less deeply forked and in having more than one division. Since posterior splitting of the comb occurs in Buttercups, Bredas and La Flèche, all breeds lacking crests, it is clear that action of D is entirely independent of any tendency of splitting exerted by the crest."

Since non-bearded Silkies suffer sometimes from a wrong comb type (walnut - pea + rose) and pea prevents the formation of wattles, they should have a rose comb. It is possible to breed a rose comb without more points at the end of the comb on non-bearded Silkies, just look at the English and Australian Silkies.

Just think of the implications of the walnut comb in bearded Silkies. You can't use bearded Silkies in your



1938 USA, Schilling Silkie with one spike on the comb?

Trifid or duplex comb in rose comb of USA-Silkies?

Dr Ron Okimoto on the trifid rose comb on Silkies:

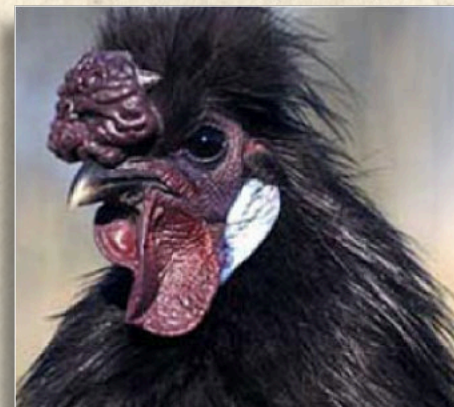
"I have speculated that the trifid rose comb on Silkies described by Punnett could be a duplex rose comb. Duplex D^ΔV greatly reduces the comb

unbearded ones because you ruin the wattles due to pea comb coming with it. This apart from hairy faces, the unbearded Silkies from bearded can have. The reason? No idea, Mb is gone after a few back-crosses to unbearded yet still they don't always have a naked skin in their face. And that's not because Mb/mb+ so 'half' beard with low expression is present. Mb muffs/beard itself also shrinks the wattles, therefore there is no real need to use pea comb in the bearded.

mass and larger crests are associated with it. It could be assumed that breeds with large crests carry duplex. Duplex produces two or three comb thorns on the back of the 'cut-off' rose comb instead of one on Silkie. So it is a kind of rose comb with side sprigs with a much smaller comb mass."

To add (svd), duplex comb gives normal wattles, so they are less reduced compared to pea comb and of similar size as rose comb. Duplex in this case can be bred out which increases the comb mass and shrinks the crest again. I'm sure Paduas are used in the USA Silkies.

The old USA Silkie standard mentioned trifid in the past: "Sometimes two or three small rear points hidden by the crest, others without points. Generally considered to be genetically a rose comb, changed by rose comb plus crest." Today trifid of 'bifid' is left out completely; "... and with a number of small prominences over it." Interesting.



Okimoto on the sort of side sprigs on duplex rose combs on Silkies. Plus a real duplex-V comb.

Below: USA Silkies, bottom right looks like heterozygous duplex?

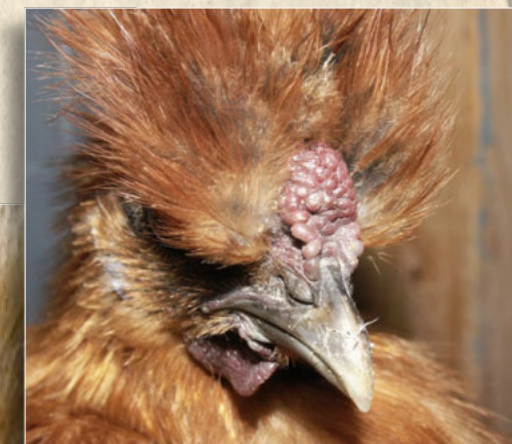
Drawback of rose comb

Rose comb is known for 'reverting' to single comb. I wrote an [article](#) on this long ago (2008). Just like in Wyandottes you can expect a few single combed when the comb is a rose. An article on a 2nd allele of rose comb (yes) will follow later.

In conclusion

As someone interested only in genetics and the phenomena of how genes can express, this exhibit on how the rose comb on Silkies can look with or without other comb types. And the rose comb makes automatically comb thorns, unless you select against it. Selection is the way to alter the shape of a rose comb in similar circumstances.

It all comes down to: using your eyes. Seeing how a comb can change, here because of... a collision with the crest, that's where this story started and ends: with Trifid.



An occasional single comb can happen in rose comb. When the father is R/r+ and his R dies and mum is also R/r+.



Dunn & Jull around 1930 - [On the inheritance of some characters of the Silky fowl](#) (disclaimer, we are further with this in 2022, to copy link: <https://www.ias.ac.in/article/fulltext/jgen/019/01/0027-0063> My old article on rose comb and infertility: <http://www.aviculture-europe.nl/nummers/08E04A06.pdf>



Above: two project cockerels, one with trifid-like protrusions and the other not.