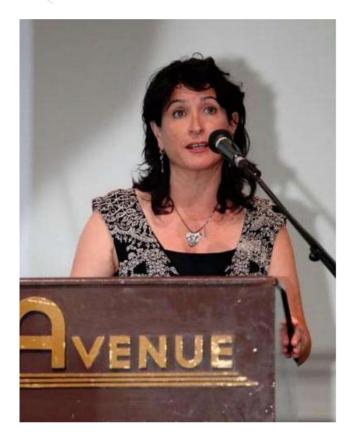
Orit Nevo & Linda Costa



About Orit Nevo (IL)

Orit Nevo graduated the Israeli Kennel Club Cynological Academy in 1985 and became the Israeli breeding co-ordinator for the Rhodesian Ridgeback as well as for English Mastiff, Bullmastiff, Fila Brasiliero, Bouvier de Flanders and Tibetan Mastiff. She was among the founding members of the Rhodesian Ridgeback Club of Israel (RRCI) in 1994 and been the Club's President since then.

She has also been the editor of the Israeli Kennel Club Magazine ("Dogs' World") and a member of the Israeli Kennel Club Scientific Breeding Committee. In 2010 she was appointed as a member of the Israeli Kennel Club Educational Committee, and has led many seminars and lectures on a variety of topics.

Orit Nevo has been breeding Ridgebacks under the kennel name "Rich-Rach" since 1997. She is a FCI International judge for Rhodesian Ridgeback (since 1994) and several other breeds.

On a personal level, Orit Nevo is active in different organizations dedicated to animal welfare and environment protection.



About Linda Costa (AU)

Linda Costa joined the Rhodesian Ridgeback Club – The Parent Club – in 1987 when living in Zimbabwe and is now a Vice President and Life Member of that Club, although residing in Australia since 2001. She served for several years as a committee member of the Zimbabwe Kennel Club in Harare.

She breeds under the Kennel name Sarula and has exported Ridgebacks to various countries over the years. She continues to breed in Australia using old Zimbabwean bloodlines.

She became a fully qualified specialist Ridgeback while living in Zimbabwe and has subsequently judged in South Africa, New Zealand, Australia, Canada, Switzerland, Italy, Germany, Austria, Denmark, Czech Republic, Israel and Russia.

In 2004 she published the book "Rhodesian Ridgeback Pioneers", the culmination of many years of research into the birth and development of the breed in Southern Rhodesia, now Zimbabwe. She continues to write and research on this topic as well as prepare seminars and articles on various aspects of the breed.

Abstract

Prologue

This presentation is the result of the joint efforts of two Ridgeback breeders. Orit is the breeding coordinator of the breed in Israel for 30 years now. She says - when I started escorting (suggestion: "guiding" instead of escorting) the breed in Israel there was so much to improve. We worked hard and after ten years I realized that while we had accomplished many improvements: type and construction, behavior, and even HD results became better; still one thing seemed to be "stuck" under a kind of glass ceiling – the percentage of pups born with faulty ridges (not Ridgeless). We were very strict (in 30 years and 54 litters, we allowed only once a litter with a parent who had faulty ridged), we "sacrificed" about 14% of our breeding stock and still - percentages of faulty ridges stayed the same.

were no other feature we disqualified so many dogs — but still it was the same feature that didn't improved at all. So I started a long journey of 15 years, trying to understand this enigma: is it an indication that we are aiming somewhere impossible, and might even do something wrong; or that we must accept this as unavoidable? Together with my colleague Linda Costa, Vice President of the Rhodesian Ridgeback Club — The Parent Club, we came to this point, holding distinctive

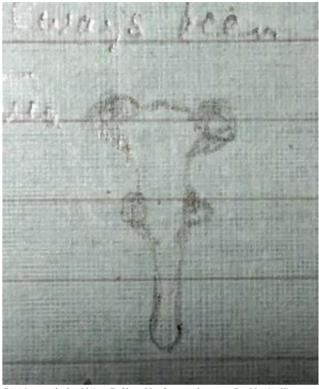
opinions; together we would like to present the dilemma to you.

The evolution of the Ridge standard – the facts

Descriptions of the Ridgeback that goes to the time before the official standard, and the first standard, refer to the Ridge as a "Fiddle shape", what we believe might be a ridge with a very large box, that might have had 2 or 4 crowns.



Manscross Chevallier of Hub, born 1949, on the back of the picture Mrs MacKenzie (Manscross) wrote "He has a "fiddle shaped" ridge. Courtesy of the Parent Club Archive.



Drawing made by Major Godfrey Mundy at a letter to Dr Martin Kingcome 16.4.1945 – describing what he called "My idea has always been that perfections is a double crown thus: "Courtesy of the Parent

The first standard (1926) says: "This ridge is broad behind the shoulders tapers off toward the root of the tail. It should be clearly defined and start immediately behind the shoulders, continue up to or over the loin. In shape it resembles a fiddle with the strings towards the tail". It describes a shape that nowadays will be consider incorrect (too long box), and there are no crowns mentioned whatsoever. No mention of: crowns, symmetry or box in the original standard. In 1931 the official standard was changed for the first time and the resemblance to fiddle was omitted, but nothing else was changed. In 1936/40/45 there have been modifications to the standard size and color were changed but the ridge description remained as it was.

A big change occurred in the 1948 standard (a pink booklet) where we see for the first time a much more detailed description of the ridge: "The ridge should be clearly defined, tapering and symmetrical. It should start immediately behind the shoulders and continue up to the hip bones, and should contain 2 identical crowns opposite each other. The lower edge of the crowns should not extend further down the ridge then 1/3 of the length of the ridge. N.B. we do not at this stage

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propose standardising the width of the ridge, but feel that up to 2 inches is good average". It is only in the 6th version of the standard that we now find: symmetry, 2 identical crowns, an indication to the extent of the box and its length and a recommended width. It was also the last time the ridge description was changed significantly.

Historical Background of the ridge changes in the Standard of 1948

To try and understand what was behind this major shift in the 1948 standard, Linda has prepared a detailed and factual account supported by primary sources held in the Parent Club Archive.

The original standard was penned by Francis Barnes, in essence it was maintained by the Rhodesian Ridgeback Club (the Parent Club) through the South African Kennel Union. Slight changes were made in 1931/36/45. During that time there had been a few sporadic letters to the Parent Club committee from members asking for clarification on what the ideal ridge was. Mabel Wellings (Leo Kop kennel), a committee member was particularly concerned that the ridge was becoming all-important. In 1944 she writes to Major Mundy (Chairman of the Parent Club, Shipley kennel): "A point had been brought to my notice about the judging in the Union. In some cases Challenge Certificates are not given if there is the very smallest irregularity in the ridge itself. In one case it was refused because the ridge finished with only one crown instead of two on the shoulder, otherwise the ridge was perfect both in length and breadth. If I remember rightly the only Champion of the Breed so far had a very inferior ridge and much too short...... So the position is now

that an inferior dog with a perfect ridge is likely to beat a superior dog with a slightly defective ridge. Could the Club give a ruling on this for circulation..."

In 1945 a series of letters between the Vice President of the Parent Club, Dr M Kingcome (Judge and Inspector of the Parent Club – his wife bred with the Inkabusi prefix) and Major Mundy discuss what an ideal ridge might be. Mundy suggests a ridge with 4 crowns, symmetrically placed on a long ridge. Kingcome replies: "With regard to the Ridge – the escutcheon of the Ridgeback Breed – I am of the opinion that far too much emphasis is placed on the extent, outline, crowns etc of the Ridge at the expense of other important points of the Breed especially the ...Head.... I consider

this factor as pre-eminent as any other characteristics of the Breed...". He then goes on to advocate a long ridge with two crowns as being ideal, but does not specify two crowns as being essential.

In 1945, a Rhodesian Ridgeback Club was proposed by some breeders in the Union of South Africa. The Parent Club were opposed to the formation of a separate and independent club, and proposed that any new club be rather affiliated to the Parent Club. However, SAKU granted affiliation to the new club - the Transvaal Rhodesian Ridgeback Club which was formalized in 1946. At their first general meeting the new club formally adopted the standard of the Parent Club in all its parts which a rider that "changes to the standard could only be made by mutual agreement of both clubs". In their first set of Rules and Constitution the new club formally adopted the Standard of the Parent Club in all its parts.

In May 1946 the new club circulated to Union judges the system to be followed for judging Rhodesian Ridgebacks. It was a form of an elaboration of the Standard and it gave the description of RIDGE as similar to the standard, but there was a **further** definition of "CROWNS: Two or two pairs of crowns (four) to be considered both correct—main point is symmetry. Extra unsymmetrical crowns to be discounted for—suggest deduct 5 points for every extra crown. A broken ridge should be severely penalized. LENGTH OF RIDGE: Suggest deduct 5 points off for ½ minimum length, Suggest deduct 10 points off for ½ minimum length, Suggest deduct 20 points off for less than ½ minimum length. WIDTH OF RIDGE: A too narrow and too broad ridge should be discounted for".

Captain T. C Hawley, an employee of the South African Police Dog Department, was on the committee of the new Transvaal Club. In August 1946 he travelled up to Rhodesia on a 6 day "special mission on behalf of the Club to contact the Parent Club and investigate matters pertaining to Ridgebacks there". He compiled an extensive report. He wrote: "RIDGE: it is patent that a dog with a bad ridge has no longer a hope to win the top honours. The judging in Rhodesia confirmed this. I tried to establish in Rhodesia whether there was any reason at all why bad ridges should be tolerated (there might have been some good points which accompanied these irregular ridges e.g. temperamental or physical excellence), but I have not met a single one who has attempted to make out a case in favour of what the standard visualizes. I venture to restate my definition of a ridge and advocate that serious thought be given to its adoption: "It should contain two identical clearly

defined crowns opposite each other, situated at least half the diameter of the crown from the fringe at the base of the ridge and not more than one-third of the total length of the ridge from the base; the measurements to be taken when the dog is standing naturally alert and without the skin being manipulated in any way". I am convinced that if this is accepted and adopted we shall have uniform ridges within a few generations. Except that the number and location of the crowns are not specified in the Standards, I submit it is not capable of any other interpretation. The Rhodesians agree that one cannot lay down the length of the ridges in terms of inches since the size and build of the dog determines this, but that a maximum ridge should extend from the points of the shoulder blades to a point between the two prominences of the hip (haunch) bones."

In July 1946, at the Annual General Meeting of the Parent Club, it is recorded: "Major Mundy reported that some members thought a clearer definition of the appearance and conformation of the "ridge" was required. The difficulties attaching to an inelastic definition were discussed but no decision was reached other than that the ridge should be unbroken, should extend well back beyond the last rib to over the loins and should have a clearly defined outline."

Meanwhile, back in the Union, following Captain Hawley's report, at their next Annual General Meeting in December 1946 the following proposal was unanimously carried under the heading "The Ideal Ridge": "That the Transvaal Rhodesian Ridgeback considers the definition of the Ridge in the Standard to be inadequate and reckons that the ideal ridge should conform to what is laid in the standard but to the following definition as well as: "The Ridge should contain two identical clearly defined crowns opposite each other, situated at least half the diameter of the crown from the fringe at the base of the ridge and not more than one-third of the total length of the ridge from the base; the measurements to be taken when the dog is standing naturally alert and without the skin being manipulated in any way....It was agreed that

the Rhodesian Ridgeback Club (the Parent Club) be approached again to consider coming to an agreement on this extended definition, so that it can be included in the standard of the two clubs.".

In March 1947 The Parent Club were still debating the suggestions of the Transvaal Club at a Special General Meeting and not yet prepared to accept them. In July 1947, a further Special General Meeting was held by

the Parent Club to discuss the report and its possible implications. The minutes record: "Capt T C Hawley's Report ... has been circularized previously, and thrown open for discussion ... A discussion ensued and Capt. Hawley's definition of the Ridge, the outstanding characteristic of the Rhodesian Ridgeback breed was accepted with modification proposed by Major Mundy and seconded by Mr Kingcome. As several members were at variance on many points of the breed a Sub Committee was appointed to go into these debatable points, such as ridge, colour and height and report back to the Executive Committee ...".

The next AGM had the findings of the Sub Committee's report tabled, but no unanimity could be reached. The next AGM of the Parent Club was held in September 1947. It was at this stage that the Parent Club committee came to a unanimous agreement as to an amended definition of the ridge. It is similar to what we know as the 1948 Standard, only without the N.B. regarding the width.

In February 1948 the Transvaal Club held their AGM. The Parent Clubs' proposals were discussed and all were accepted, except for their position on Height.

In July 1948 the Parent Club agreed to the immediate reprinting of the Club handbook containing the altered wording. This was published in November 1948 with a pink cover, and changed only very little since then.

The Survey

Realizing now that the detailed definition of the ridge appeared in the 6th version of the standard, 22 years after the first standard was approved, and with the test-case of Israel, with a constant 14% percent of "incorrect" ridges, we wanted to see what the global picture was. Between February and April 2016 we distributed a survey open to any Ridgeback breeder to answer anonymously. We got 152 responses including data covering 1,527 litters and 12,823 dogs. The first litter in our data base is from 1975 and the latest from 2016. We believe this data base, though based on trust, includes valuable information about the breed from all the continents where it exists.

We would like to stress that we didn't count the absence of a ridge (ridgeless) as a ridge fault, *a*) because it is clear that a missing ridge is a fundamental fault, and *b*) there was purported to be a simple DNA test that can tell us how this characteristic is inherited, unlike ridge-shape.

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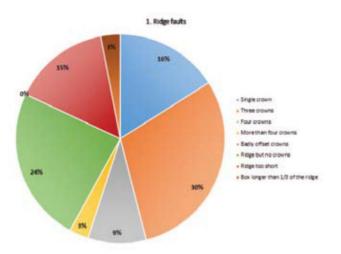
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We found out that:

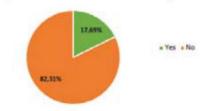
- Only 17.6% out of the 1,527 litters were free from any form of ridge fault.
- 6.96% of the 12,823 pups were ridgeless.
- 14.75% of the 12,823 pups had any variety of ridge fault.
- So total together ridge faults and ridgeless were 21.71%.
- The ridge faults distributed the following of the total population of the survey (*fig 1*):

•	Three crowns	4.35%
•	Badly offset crowns	3.13%
•	Too short ridge	2.50%
•	Single crown	2.15%
•	Four crowns	1.29%
•	Box longer then 1/3 of the ridge	0.49%
•	More than 4 crowns	0.48%
•	No crowns	0.10%
•	Other	0.19%

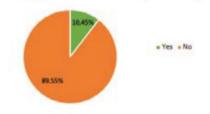
- Out of 152 breeders that answered, 21 (13.81%) gave an indication they had at some stage bred with a faulty ridged dog. Of these 21 breeders, 7 didn't specify, 8 bred from an offset animal, 3 from a short ridged and 3 from three crowns. It is important to notice that a short ridge and offset ridges are "subjective" and what one person will regard as faulty will still be acceptable by the other.
- 82.3% do not believe there is a line or a kennel that is free from ridge faults (fig 2a).
- 89.6% said that even if they knew about a line or a kennel that was free of ridge faults they wouldn't use that line solely for the ridge (*fig 2b*).
- When we asked if a dog and a bitch that produced together a whole litter of correctly ridged pups will be mated again, will the same results be predicted with the same pair at a subsequent mating 62.6% answered not necessarily, 24.5% answered no and only 12.9% answered yes.
- To the question over the years have you noticed an increase or a decrease in the number of faulty ridges in your whelping box 64.3% said it is about the same through the years, 21.7% testify decrease and 14% increase (*fig 3*).

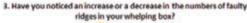


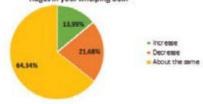




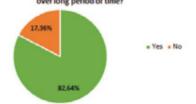
2b. If so, would you go to that line or kennel solely to select for ridges?







Do you think a certain proportion of faulty ridges are to be expected
 over long period of time?



Some thoughts

During the presentation at the World Congress the two authors will present and discuss different views, here we give just an overview of them. We have indica-ted who holds which position.

• Can we live without those 15% of faulty ridged dogs in our gene pool?

Orit: On one hand – we exclude about 22% of our stock based on the ridge (7% ridgeless and about 15% faulty ridges), on top of that we are eliminating for health issues, dentition, kinky tails, colour and then because of poor structure, type or movement. Can we really afford that? Many researchers indicate nowadays that a strict exclusion of individuals because of a sole reason, even when health related, can be damaging for the population.

Linda: On the other hand the Ridgeback global population is huge and diverse, there are so many good dogs around and modern technology helps us to bridge distances so there are people that strongly argue it is not an issue to spare those nearly 15%.

Is nature trying to tell us something?

Orit: When you can't improve on a point, no matter how hard you try, for how long and what you sacrifice for it, can it be that nature tells you that you are trying to do the impossible or the unnatural? Maybe the glass ceiling is there for a reason?

Where would we be without the selection practices we used for the last 70 years?

Linda: If we complain about the percentage of faulty ridges, where would we be if we had allowed any kind of ridge to be used in the breeding program in the past? We might face a greater percentage of faulty ridges today, like the Thai Ridgeback.

What do we know about the heritability of the ridge characteristics?

Linda: For some years now it was believed that the absence or presence of a ridge followed a simple Mendelian pattern of inheritance, where the "ridge present" phenotype was a dominant trait and the "ridge absent" phenotype was a recessive trait. However, this has not been shown to be fully predictive and cannot be accepted as

being 100% reliable. We know even less about the inheritance of ridge characteristics in terms of length, placement or number of crowns. So on one hand as long as we are unsure of the genetic heritability of ridge characteristics perhaps we are better to play it safe and keep eliminating these dogs from the breeding pool.

Orit: But on the other hand can we disqualify dogs for only the phenotype?

Pandora's Box?

Linda: If breeders make "allowances" for incorrect ridges might that not also open the door for suggesting other alterations in other aspects of our breed.

So where do we go from here?

It is now 90 years since the first official standard of 1926. Through the years the ridge description changed and became more detailed and tighter. Changing the standard was an evolution, not a revolution, but still, some might think it might have taken us one bridge too far.

The two writers, who shared the research and brainstorming that led us to this presentation, both feel very strongly that the Standard shouldn't change, but differ on the question of whether we should keep "business as usual" or take those findings and thoughts to a further brain storming and open discussion. In NO way are either of us advocating any kind of change to the Standard, but at least one of us believes we need further discussion and might consider some shifts in our breeding ethic.

iThe complete information can be found at the "From Lion-Hunter to Show-dog - The Evolution of the Rhodesian Ridgeback Breed Standard and what we can learn from it" by Orit Nevo, RRWC 2004 — see: http:// http://www.nordicrrwc.org/supplementary

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Year	Document	Ridge description
07.02.1923	Edmond (farmer George)	The mane, razor-back, fiddle-back or whorl – a ridge of hair up to 2 inches in height, commence above the shoulders, where it is broadest and continues along the centre of the back finishing at a point opposite the hips.
1926	The Original Standard Yellow booklet	The peculiarity of this breed is the ridge on the back, which is formed by the hair growing in the opposite direction to the rest of the coat. This ridge, which must be regarded as the escutcheon of the breed, is broad behind the shoulders tapers off toward the root of the tail. It should be clearly defined and start immediately behind the shoulders, continue up to or over the loin. In shape it resembles a fiddle with the strings towards the tail. A dog without a clearly defined ridge is not recognised as belonging to this breed.
1931	First modification of the standard- Blue booklet	resemblance to fiddle omitted
1936/1940	2nd & 3rd modifications to the standard	No modifications on the ridge.
1945	4th modifications to the standard. 2nd White booklet	No modifications on the ridge.
1948	5th modification of the standard Pink booklet	The peculiarity of this breed is the ridge on the back, which is formed by the hair growing in the opposite direction to the rest of the coat; the ridge must be regarded as the escutcheon of the breed.
		The ridge should be clearly defined, tapering and symmetrical . It should start immediately behind the shoulders and continue up to the hip bones, and should contain 2 identical crowns opposite each other. The lower edge of the crowns should not extend further down the ridge then 1/3 of the length of the ridge.
		N.B. we do not at this stage propose standardising the width of the ridge, but feel that up to 2 inches is good average.
1952	6th modification	Up to hip bone replaced with up to the point between the prominence of the hips. The N.B. suggestion was omitted.
1986	the British Kennel Club revises all its standards under one uniform formula.	Ridge – Adding "must contain two identical crowns only."