SCI Complex Measuring

Supplemental Instructions for Red Deer

and Non-Typical White-tailed Deer

I. INTRODUCTION

These Supplemental Instructions have been created to help measurers around the world to consistently and accurately score complex deer species with the red deer and white-tailed deer being the focus. This supplement was created as a compliment to the "General Instructions for Deer Entries" section of the current SCI Measuring Manual and this supplement is intended to further expand on those instructions as they relate to characteristics found on complex antlers.

II. MEASURING LENGTH OF MAIN BEAM

First, it is necessary to determine the main beams and each main beam tip (also read Section III below to help identify the main beam tip). In most red deer, the main beams will be easy to identify, and the beam tips will clearly be the rearmost points. However, when an antler has complex crown points, it may be difficult to decide which one should be the tip of the main beam. When in doubt, the measurer should choose the one that appears to be the logical beam tip because of its contour, size and location. Measurers may use the example provided in the SCI Measuring Manual for a red deer to find the main beams that mimic a typical red deer main beam.

In all antlered deer (except palmated moose), the main beams are measured from the bottom edge of the burr (or coronet) to the tip. The measurement follows the center of the antlers outer curve and is essentially parallel to the longitudinal blood grooves. The center of the outer curve is easiest to locate at mid-length, especially after the tines have been marked off from the beam with a pencil line*. Many measurers then prefer to begin at the beam tip and follow the grooves around the outer curve to the burr; however, this measurement can be taken in either direction. Begin (or end) the measurement where the center-line of the outer curve intersects the base of the burr. This will be on the side of the head and behind the eye (not in front on the forehead). Do not press the cable into the corner where the antler beam meets the burr. The measurement should follow the center of the designated antler beam—in between the marks indicating the sides of the main beam--and should not go over any webbing.

*Labeling the main beam is a critical step in measuring complex species and will help any measurer to understand where to measure tines back to. Some measurers draw the main beams using a pencil, chalk, or markers. Using tape can also be used and many of the photos in this supplement provide examples of using tape to mark off beams of tines. Labeling the main beam is also important to avoid measuring the main beam twice with antlers that have many tines. Using tape or drawing in beams and tines is also referred to "Mapping" the antler. The intent of mapping an antler is to provide a reference as to how a measurer has determined the shape and contour of the main beams and tines when the contour of a tine or main beam is hidden by webbing.

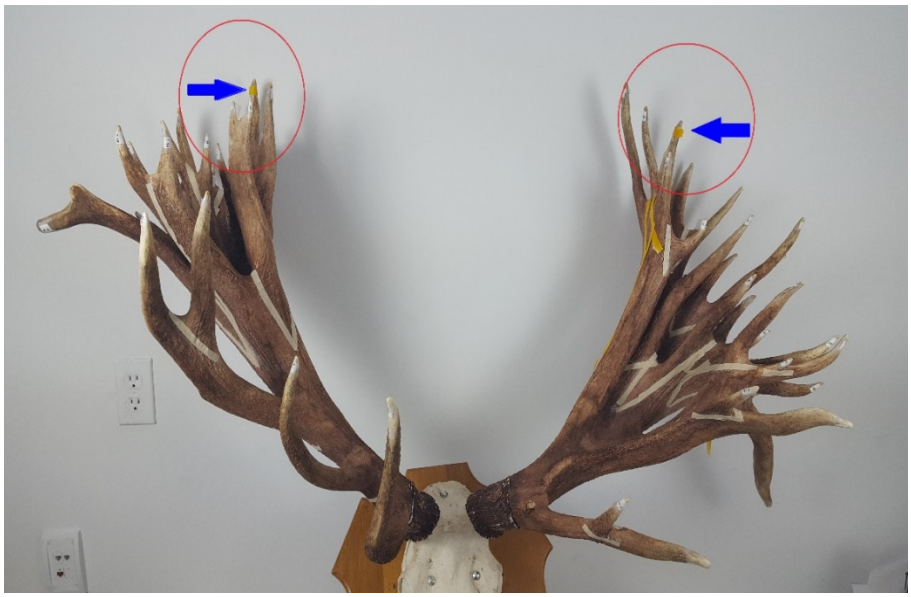
When measuring antlers that have a great number of tines (such as red deer, caribou/reindeer, and non-typical white-tailed deer), it is easy to lose count and either miss some tines or measure the same tines twice. We suggest that measurers mark each tine (mark main beam tips differently) with pieces of masking tape, then remove the tape as each tine is measured. If done carefully, when all tape has been removed, all tines will have been measured. Labeling the tape with the appropriate tine number will also help measurers to assure they measure each tine only once.

III. **CHOOSING A MAIN BEAM TIP**

The main beam on a Red Deer is the beam that follows the contour and shape of the main antler beams. The main beam may sometimes get lost or mixed up with crown tines that come out of the crown area. Following the main beam out of the crown, try to determine the most prominent growth coming out of the crown area that would mimic the main beam configuration of a "typical" red stag, and one that is always preserved in any stag, regardless of how complex they might be.

Always label the main beam tip to make sure it is only measured one time in the length of main beam measurement. Look for predominant blood groove patterns to help determine which tine is the main antler tip. Remnant blood grooves will help a measurer determine how a tine or beam grew, but blood grooves do not ultimately define tines and in some cases blood grooves may not match from side to side.

- Look at the beam from all sides, front, back, left, and right to form a 3-D picture of the beam. Your three-dimensional picture that you are constructing of the total antler will resemble that of a tree, with a trunk, large branches growing from the trunk and smaller branches growing off the large branches. After every tine has been marked off at the origin of its growth, then you are ready to start measuring and recording those measurements.

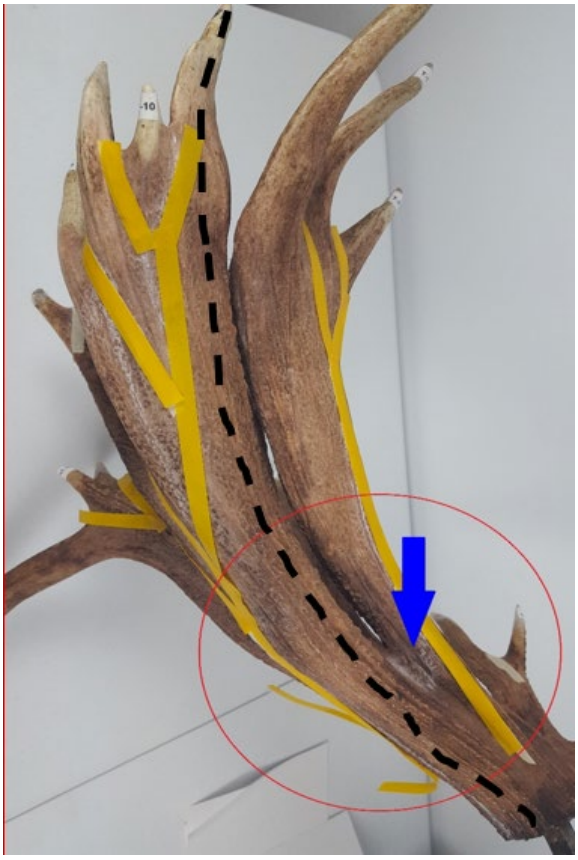


(Photo 1, Front View with the arrows pointing to the designated Main Beam Tips. Tape was used to help dissect tines from tines or tines from the main beam)

- Think of the main beam as one long-tine. It will have tapered growth, meaning that as you get towards the tip, the beam will become smaller.

(Photo 1A – Is the rear view of photo 1 showing the designated main beam tips. Tape was used to help dissect tines from tines or tines from the main beam)

- The measurer should draw a line (or use tape, string, cable, etc.) to help define the outside of the main beam as it would appear if the tines and webbing did not exist. (Photos 1 & 2 show white and yellow tape that mark the sides of the tines and the main beam)
    1. The drawn in line will make it easier to determine the center of the antler's outer curve, which the length of the main beam measurement must follow. (Photos 2A & 2B show the dashed lines where the measurement will take place)
    2. Marking the outside of the main beam with a line will also help the measurer determine the point of origin of tines growing off the main beam. (See Photo 2B)



(Photo 2A - shows the Blue Arrow pointing to the black dashed line where the measurement will take place. Yellow tape was used to demonstrate the sides of tines)

- When a tine, webbing, or other antler material interferes with any measurement, be sure to caliper around the obstruction being sure to measure to the caliper point in front and back of the obstruction and add in the caliper width to the total measurement.

(Photo 2B - shows the back view or a red deer with black dashed lines indicating where the main beam measurements were taken from. White and yellow tape was used to help indicate the sides of the main beam or tines)

IV. DETERMINING TINES

Tines are the secondary points--the branches that grow from the main beams, or from other tines (parent tines). Thus, a tine is always a point, but a point is not always a tine (it may be the beam tip). The main beam tips are the tips of the main beam and they are not included as a tine measurement. Be sure NOT to measure the tip of the main beam as a tine. Always label the main beam tip to avoid measuring it twice.

It is necessary to use tape or another identifying mark to label each measurable tine on each side before measuring. This is done after identifying and distinctly marking the main beam tip. Different colors can be used to help identify typical and non-typical tines below the crown as everything from above the crown is identified as a typical tine for red deer. For white-tailed deer any tine that does not fall into the typical line of the main beam will be considered as a non-typical tine. It is recommended that each tine get labeled exactly like the score sheet so that the measurer can measure each tine and then indicate that measurement on the corresponding line of the score sheet. This tip will allow the measurer to keep track of their measurements while measuring.

To be valid, a point or tine must meet certain conditions (see General Instructions for Deer Entries #3 for Determining what is a valid tine). The main beam tip is always a valid point because it is part of the main beam, and the main beam is always considered a valid point. Other projections may or may not qualify as valid tines, depending on their length and relative width.

For complex red deer and white-tailed deer, there may be tines that do not necessarily have a sharp tip as they may have been rubbed off, broken, or just happen to grow abnormally wide. In these cases, we need to evaluate the blood grooves and contour of these to determine the justification of measuring and scoring of such tines. In some examples, the tine may be several inches in length and so not counting this as a scorable tine may impact the overall score considerably. (See Photos 3 and 4)

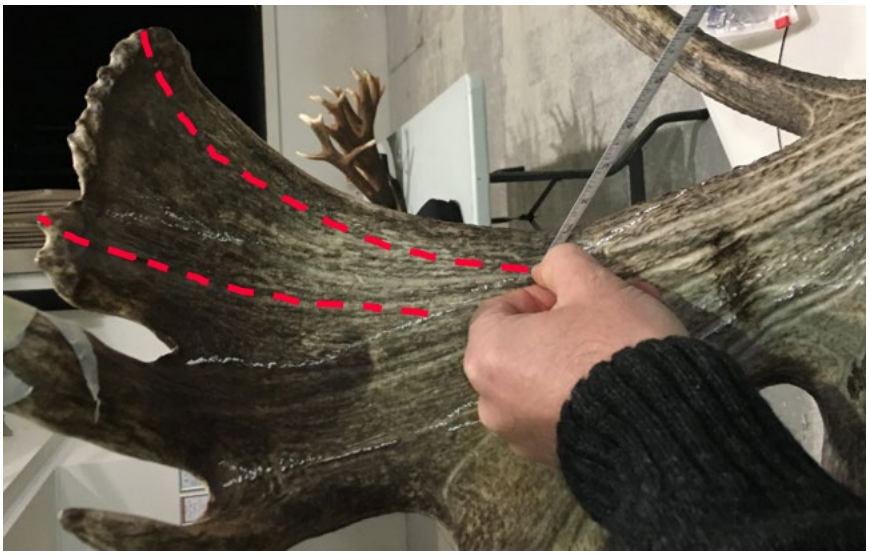
V. MEASURING TINES IN WEBBING:

Valid tines that project out of webbing can be measured down to the main beam or the parent tine it originates from. The point where a tine connects to the main beam or parent tine is also called its "base". The measurement should follow the tip's contour and blood grooves from the tip of the tine through the webbing back to its base. Please note that with webbed antlers, it is very important to map the antler by adding pencil or chalk lines to mark off the main beam and all tines. In many cases, the tine may appear flat and there will not be a distinct round shape to define the tine so drawing in the sides, or where the side would be if not webbed, will assist during measuring. Remember that beams and tines are typically wider at the base and gradually decrease in width out to the tip.

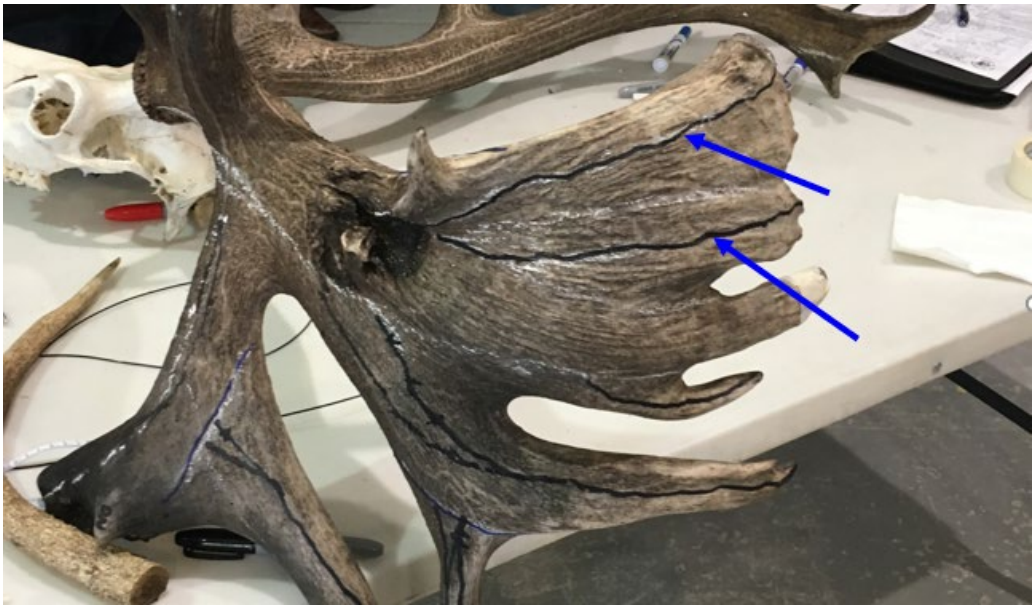
For larger masses of webbing that do not have valid tines projecting out of the webbing (see Photos 3 and 5), it is SCI's practice to give the animal credit for what it grew and even though it may not have a definable tine growing out of the webbing, that material will have a tine measurement. The webbing that comes off a main beam or a tine may only be measured as one tine unless the measurer can justify that the webbing actually separates into separate sections (or tines) adjoined through webbing. The separation of webbing may take the form of a gap or by an indentation in the webbing like you would see in a double tine (if it were cross sectioned off), except the figure eight shape will be much more elongated. For webbed flat tines that do not have a distinct tip, measure from the longest piece of antler above the webbing down to its base using remnant blood grooves to guide your tape. The measurement should be taken down to the base either in line with the drawn-out tine or in the middle of the webbing.

Tines that come off or through webbing are common when measuring Complex antlers (see General Instructions for Deer Entries #8 Webbed Antlers). Since webbing is not a measurable feature on complex antlers, we must still determine and label the top of the beam or tine as if the webbing was not present. This will identify the center of where we would measure a tine back to the beam or another tine (See Photo 5). This image, depicts how to measure through webbing and how tines must be brought back to either the main beam or another tine.

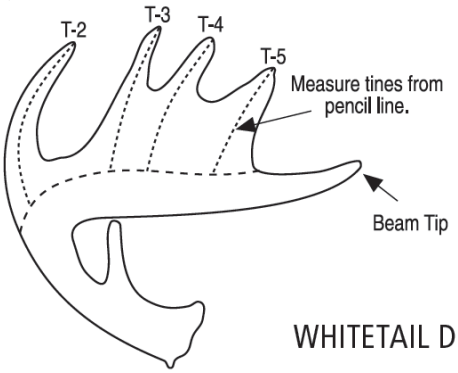
With the outside edge of the main beam defined, (Photo 5 dashed black line) the measurer should examine the blood grooves and feel the antler to determine where each tine intersects the main beam or another tine.



(Photo 3 - Based on blood grooves and contour we identified 2 scorable tines [red dashed line])

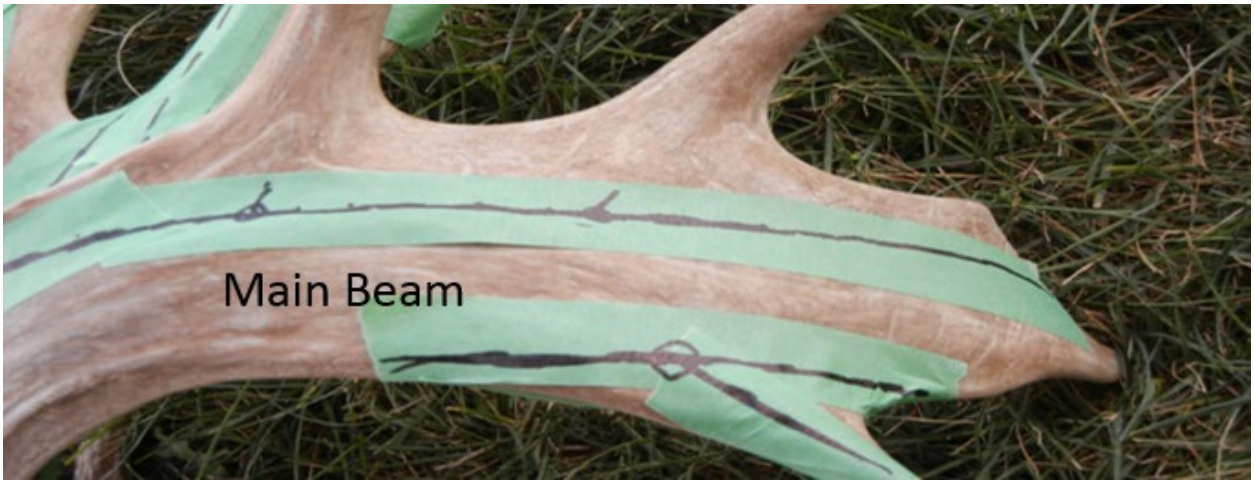


(Photo 4 - shows the outside view with the black lines indicating the line of measurement)



(Figure 1 – White-tailed deer antler mapped to show the main beam and tine measurements through webbing. Measure from the tip of the tine through webbing down to the base or top of the main beam)

(Photo 5 - shows the marking of tines off a tine and beam with webbing)



(Photo 6 - demonstrates a webbed white-tailed deer main beam with the main beam mapped indicating the top and bottom of the beam and the locations for the measuring of tines from the top and bottom of the beam to the tip)

VI. DOUBLE TINES

Please review **"**General Instructions for Deer Entries" section #9 (Two tines with a common base). Double tines are very common on red deer and white-tailed deer and they can grow off a main beam or off another tine. Only double tines that meet the criteria to be double tines may be measured as so. It is very important to review the four rules that apply to double tines:

(1) Each projection should be at least 3/8ths of an inch from its tip to where the tine splits;

(2) Each of the two projections must qualify as a valid tine when measured from its tip to the main beam (or another tine);
(3) The blood grooves of each projection must clearly connect to the main beam (or tine) and not to each other;
(4) The baseline (cross section of bases of both projections) must appear as a figure eight on at least one side.

(Photo 7 - Example of a double tine on a white-tailed deer between T-3 and T-4. Observe that there is a clear indentation separating the two tines. Disecting the two tines would clearly show a Photoeight. Since the C- 4 is not attainable, the measurer could use the largest of the previous attainable circumference measurements for their C-4 measurement (see General Instructions section 8 for Webbed Antlers) and would indicate that measurment on the score form. Photo on the right shows the top view of the double tines with the right side facing the inside of the rack showing the indentation between the two tines)

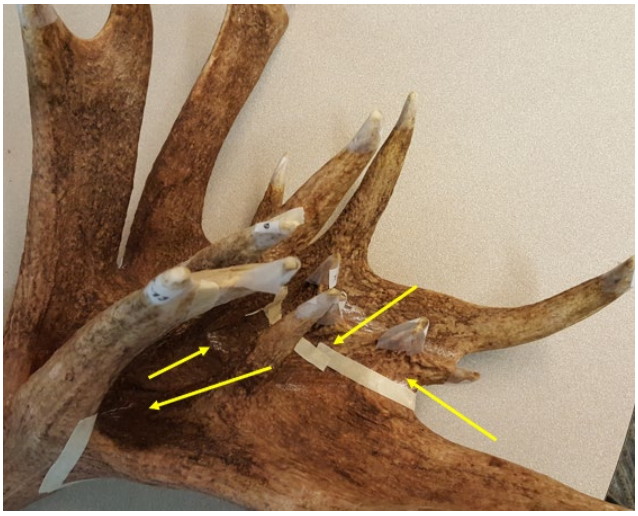
VII. TINES OFF A CROWN & "EXTRA" GROWTH

Some outstanding heads may have many upper tines that are often clustered in a form of a crown. Crowns may also appear on the lower tines (T-1 to T-3) as well, however the process for scoring will be the same.

Antler tines that are partly covered up by webbing appear shorter because of the webbing. A measurer must look at those tines as if the webbing had not formed. To measure such tines

from the web edge would unfairly penalize that animal as compared with similar antlers without webbing. Therefore, when measuring a webbed tine in these species, the measurer should carefully draw a pencil line to show the upper edge of the antler beam (or parent tine) as it would appear if the webbing had not developed and measure the length of the tine from this pencil line to the tip (See Photo 6). The line is normally drawn on the back side of the antlers, as this will be the smoothest surface and will allow most tines to be measured on their outer curve.

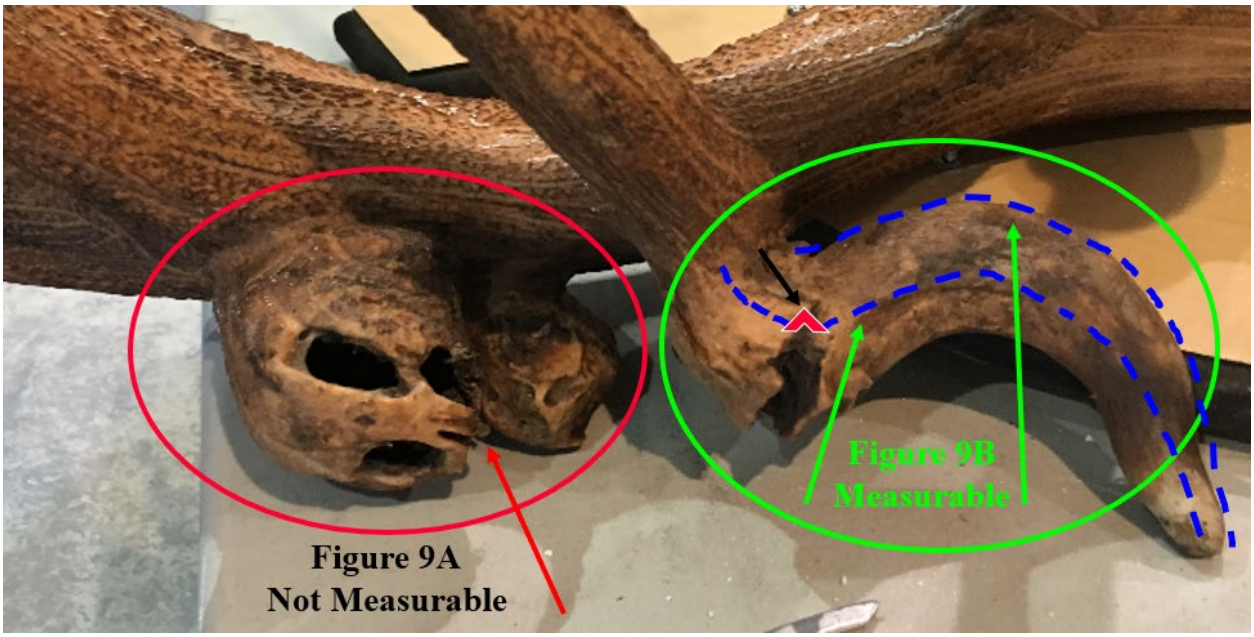
With Tines that grow out of webbing (see Photo 9), mark off the beginning or end point of all scorable tines inside a crown while also labeling them as they will be included in the typical scoring fields on the method form. These are measured all the way back to the main beam or tine they are connected to.



(Photo 8 - the yellow arrows point to bottom of the tine coming off the beam – this is where you begin your measurement. Some tines are mapped out using tape)

There may be extra “growth(s)” on complex antlers that we would need to determine if it qualifies as a tine. One thing to note is that antlers are solid and that is a major factor to consider when determining if a “growth” is measurable. In most cases these “growth(s)” should not count towards the score as they would not qualify as a measurable tine. (See Photo 9A and 9B)

For complex antlers, there may be more than one crown on each side, however these should always follow the same rules of measuring back to the main beam or to another tine. When having to take measurements of tines that are inside the crown, they still must meet the one-inch rule and measured back appropriately. See Fig. 6 for an example of where this may occur.



(Photo 9A - On the left, circled in red, shows a non-measurable growth. Photo9B on the right, circled in green, shows two possible places (blue dashed lines) to measure this tine, taking the one yielding the longest length and recording it on the method entry form)

In Photo 9A, a "growth" appears to have grown on this tine or beam. We must determine if we can measure this as a scorable tine (see General Deer Instructions #3, Determining what is a valid tine). In addition, we must be aware of not measuring any taxidermy material on a repaired tine or beam. We must have full confidence that the repair does not affect the original score of that tine.

In Photo 9B, although there appears to clearly be a broken tine we would still be able to measure down the outer curve or even the center of the tine. When measuring the center line of the tine we must caliper the gap so as not to include in the score for that tine measurement or overall score.

VIII. MEASURING A TINE

- **Basic Rule: Only measure a tine back to the main beam or to another tine.**

Tines should be measured from the center at its base to the tip at its longest length. The exception would be the brow tine (T-1) in Red Deer, which sprouts close to the burr and points forward and upward. This measurement is taken on the side down the center of the tine (see Photo 10). All other tines you can measure from the outside (usually the longest length) and in some occasions the inside if it happens to yield a longer length measurement.

(Photo 10 - the brow tine measurement should be taken as the green dashed line demonstrates, while the red dashed line measurement is incorrect since it originates on the burr)

Tines either grow off a main beam or off another tine (parent tine).

(Photo 11 - includes the dashed line where measurement will take place for each of these two tines that grow from a parent tine. Notice that the yellow tape marks off the top of the parent tine and the tine is measured back to the middle of the base)

For complex red deer antlers, there may be more than one crown on each side, however these should always follow the same rules of measuring back to the main beam or to another tine.

When having to take measurements of tines that are inside the crown, they still must meet the one-inch rule and measured back appropriately. See Photo8 for an example of where this may occur.

IX. MEASURING CIRCUMFERENCES

- **Basic Rule: A true circumference of the main beam can only be measured around the main beam. You may not measure a circumference that includes any webbing or tine material in this measurement.**

When measuring white-tailed deer antlers (Methods 17-T and 17-NT), four circumferences are taken of the main beam. This holds true regardless of the number of tines or how they are arranged. If any circumference includes webbing or any antler material that is not solely main beam, the measurer cannot take an accurate circumference of the main beam and must revert back to another circumference (additional details and scenarios are included in the General Instructions for Deer Entries 8c).

For Red Deer, measure the circumference of the burr (or coronet) at the base of each antler and two circumference measurements (C-1 and C-2). C-1 is measured between T-2 and T-3 and C-2 is taken between the T-3 and T-4. Measure the circumference of the main beam at the smallest place. If T-2 is absent, measure at the smallest place between the first typical (brow) tine (T-1) and T-3. If T-3 is absent, measure at the smallest place between T-2 and the first upper or crown tine, which will make this measurement the same as C-2.

- Please note: You may occasionally encounter a broken tine in a typical location that no longer qualifies as valid because it is broken off too short. Even though it no longer is a valid typical tine, it should still be used to locate circumferences (General Instructions for Deer Entries Photo28).

For complex antlers, webbing may be present that may make it difficult to measure the circumference(s) accurately. In these complex antlers the webbing mostly affects the main beam after the T-2 or the C-2 circumference measurement. If this is the case and you can attain a C-1 circumference measurement as normal, then use the C-1 as your C-2 measurement (See Photo 12). In the rare case that webbing affects both the C-1 and the C-2 measurements, then use the burr circumference measurement as both your C-1 and C-2 measurements. Please make sure that anytime you must duplicate circumference measurements, that you note it on the entry form.

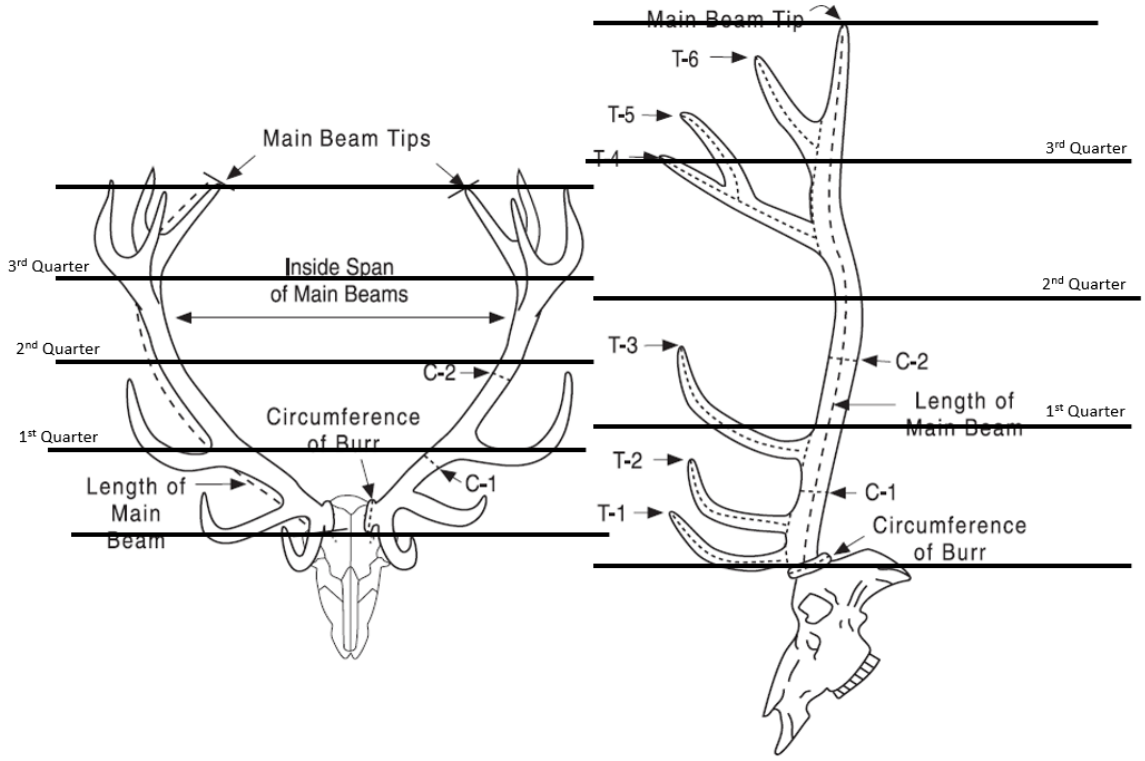
(Photo 12 - Blue Arrow shows a C-2 that includes webbing and tines that do not allow a true circumfernce of main beam measurement. In this case, use the C-1 circumference and note that on your score form.)

(Firgure 12b – another example of a webbed circumference. Chalk line was added to what the measurer believed was the main beam. The group who mesured this stag actually concluded that the circumference would not be attainable because of the tine growing out of the main beam at that location)

- Special consideration for webbed antlers without the ability to get any circumference measurements. This is only to be used in a rare situation with complex antlers when a measurer cannot attain any circumferences measurements.
    1. Choose a circumference location where the least amount of webbing exists and make marks at the location where the main beam and webbing or tine (obstruction) meet on the outside and inside of the main beam. This is done by marking off the top of the main beam below the webbing with a pencil or chalk. For this example, we will label the marks “a” and “b”.
    2. Measure the attainable circumference around the main beam antler from “a” to “b” and record that measurement.
    3. Next, use a caliper to find the distance between “a” and “b” by placing he caliber tips at both marks (“a” and “b”). Make sure the caliper is tight and remove it without increasing or decreasing the width. Measure the width of the caliper tips.
    4. Add the circumference of the main beam measurement with the calipered measurement and this will provide you with the best main beam circumference for that location.
        - in some situations, there may be more than one obstruction (webbing or tines) that restrict your ability to take a circumference. If this occurs, the measurer should mark off the circumference measurements that are attainable and use a caliper to find the distance between the obstructions and add all the measurements to help determine the circumference of the main beam.
        - If only one true circumference measurement is attainable for both sides, use that one circumference and note that on the score form. For all other scenarios please see the General Instructions Deer Entries.

(Photos 13A, 13B and 13C – demonstrate measuring a circumference that is webbed when duplicated another circumfernce is impossible. Point B is the top of the main beam on the inside of the antlers)

X. MEASURING THE INSIDE SPAN OF THE MAIN BEAMS FOR RED DEER



(Figure 2)

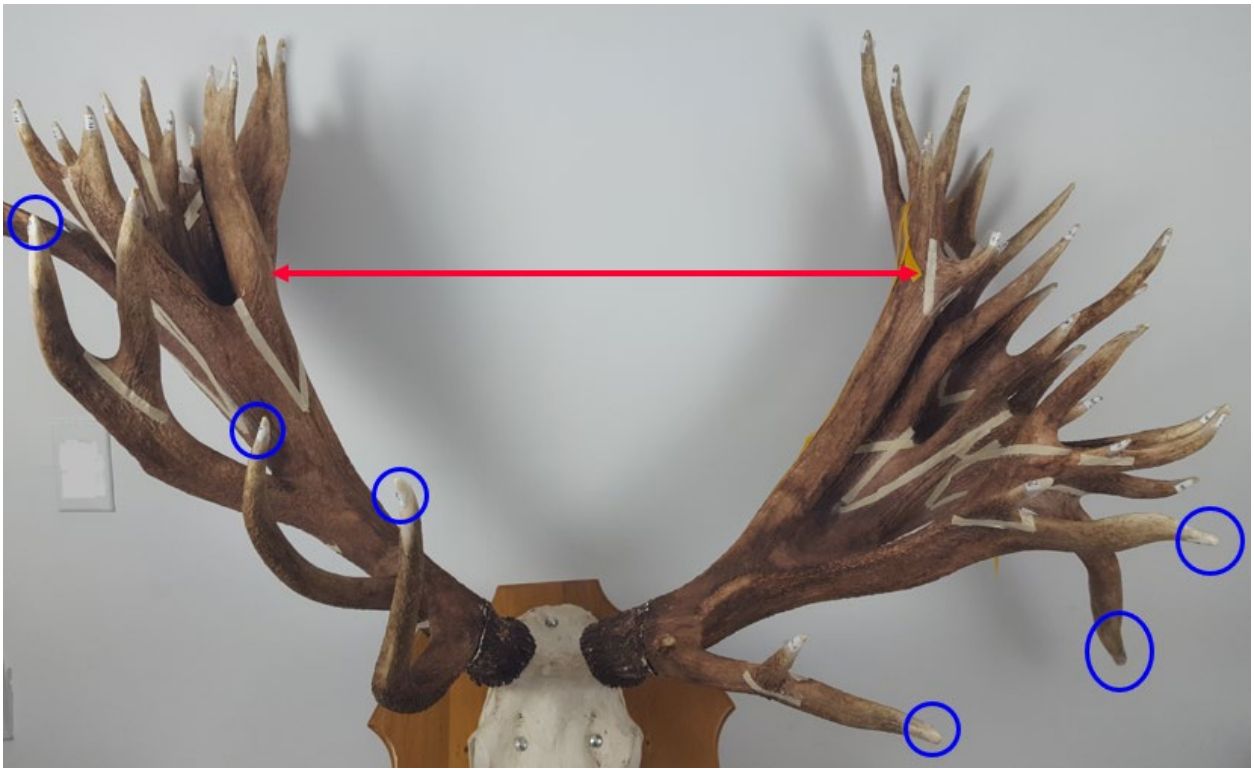
Measure the inside span of the main antler beams at or below the 3rd quarter of the main beams. To determine the quarters of the main beams, divide the length of the longer main beam (quarter length tables are provided in the back pages of the measuring manual) and mark off each quarter. The measurement must be taken at or below the 3rd quarter at a right angle to the longitudinal axis of the skull, and parallel to its horizontal axis. (See Figure 2)

This new range for the inside span of main antler beams is to account for the original method of taking the inside span for red deer at or below the 1st crown tine and to ensure the span remained an important feature for red stags that hunters favor. Over the years, measurers have observed that red stags with complex antlers have lower crown tines which has resulted in lower inside span measurements that are much narrower than the inside span of the main antler beams. This new method will allow for measurers to measure any place they wish, within the three quarters, on the inside of the main antler beams without using the tip to tip measurement. In red deer, we refer to the main antler mass that contains the main beams as the “main antler beams”. Measurers must use caution not to use any tines or other material

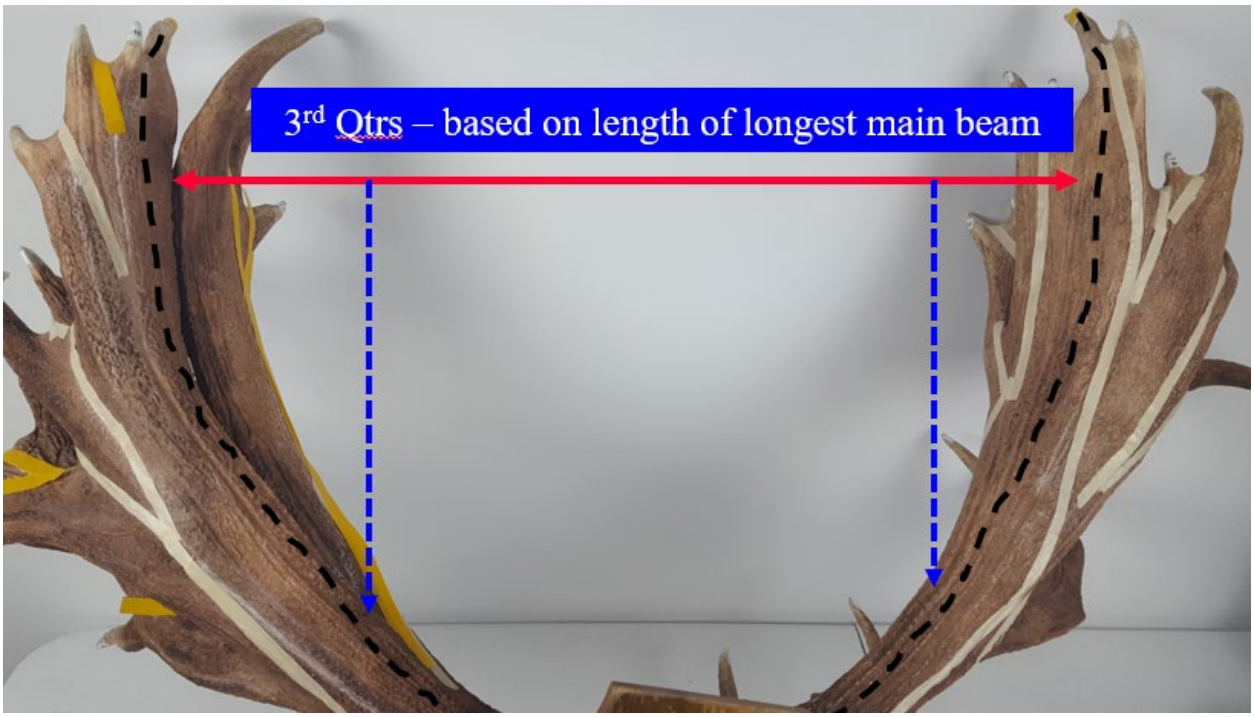
for this measurement and be sure to measure the inside of the antler mass that contains the main beam in it. The measurement is taken from the inside of the mass as opposed to where the main beam has been mapped out.

For example – If a stag has a 40-inch right main beam and a 37-inch left main beam they will use the longer of the two (the 40-inch main beam) and divide the beams into quarters. The first quarter will be 10 inches from the burr, the second quarter would be 20 inches from the burr and the third quarter would be 30 inches from the burr. Using the proposed method, a measurer could mark off his main beams at 30 inches from the burr and measure the widest inside span at or below this quarter.

If you are measuring a complex antler and this particular method is not appropriately capturing the true inside span, then please contact SCI Record Book to discuss. Any changes or approvals that come from the SCI Measuring Coordinator or Record Book must be noted on the Method Form before being submitted for approval to the Committee.



(Photo 14A – demonstrates a front view of the inside span of the main antler beams. Observe that the stags left side antler has a tine that appears to look like the main beam when in fact the other mass is the main antler beam)



(Photo 14B - The Red arrow demonstrates the inside span of the main antler beams at the 3rd quarters of the main beam on a complex red deer (quarters determined by the length of the longest main beam). The blue dotted lines indicate the area you can measure to determine the widest between the main beams. Th main beams have the black dashed lines.)

Some complex antlered deer, especially estate-bred specimens, will exhibit extensive webbing and or non-typical characteristics. Such antlers can be very complex and difficult to measure, and this supplement was created to help measurers to understand and map out those characteristics to help them measure them accurately. If a measurer has any questions, please contact the Record Book Department at the Division of Membership Services, Fundraising and Business Operations at (800) 997-0177, or measuring@safariclub.org. Also, the Record Book Department now can video conference to assist in mapping and understanding how to measure complex deer and it would be our pleasure to assist measurers worldwide to measure any complex species.

XI. PANEL SCORING CERTIFICATION FOR RED DEER

In 2019, the SCI Record Book Committee stipulated that any Red Deer that falls into the Overall Top Ten rankings will require a live video conference to panel score that entry. The video panel score will include the SCI Measuring Coordinator/RB Director/or RB Committee Sub-chair in order to be certified and approved by the SCI Record Book Committee.