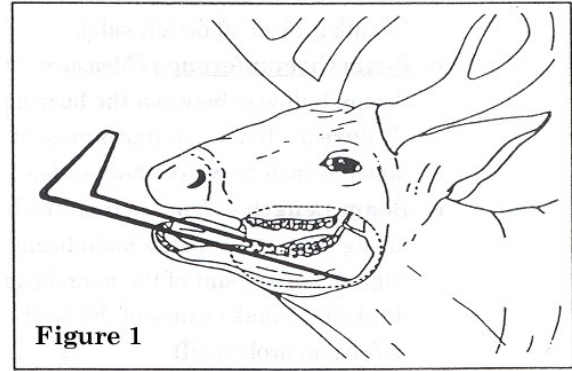


## INSTRUCTIONS FOR DATA COLLECTION

Some suggestions on how to collect, record, and store deer harvest data are discussed below:

1. **COLLECTING JAWBONES:** A single lower jawbone is required from each deer harvested so its age can be determined. Without the deer's age, all other information is virtually useless. More suggestions on how to collect jawbones follow.
  - a. The easiest, least messy, and most times, the quickest way to extract a jawbone is by using a set of pruning shears and a jawbone extractor. The shears can be purchased at most hardware stores or farmer's co-ops and the extractor can be purchased from some sporting goods stores, farmer's co-ops, or forestry equipment suppliers. If you have access to a torch and welder, the extractor can be easily made from a 4' section of 5/16" cold rolled steel or 1/4" stainless steel rod.
  - b. It is much easier to remove a jawbone if the deer's head is still attached to the body and before the deer has had time to stiffen up. The first step in extracting a jawbone is to separate the hide from the muscle on the jawbone. With the deer's nose pointed up, insert the small end of the extractor between the jawbone and the hide until it reaches the area just past the back edge of the lower jawbone. Twist and push the extractor until the skin is loose from the jawbone. Do this only on the side you plan to remove the jawbone from.
  - c. Next, prop the deer's mouth open with the extractor so you can cut through the back of the jawbone with the shears. Insert the shears so that the blade is over the tongue and the cutting bar is to the outside of the lower jaw to be cut. Cut through the lower jaw where it curves upward and try to make the cut parallel to the roof of the mouth (see **Figure 1**). Press downward on the shears as you cut to make sure you completely cut through the bone.

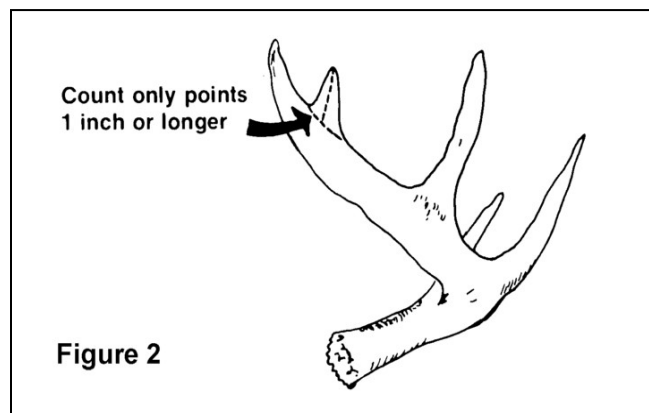
- d. Once the cut is made, insert the small end of the extractor horizontally and hook the loop over the cut end of the lower jawbone (see **Figure 1**). It may be necessary to place one hand underneath the jaw to help guide the extractor over the bottom of the



- jawbone. Once the extractor is around the jawbone, place one foot on the deer's neck and pull the extractor towards the deer's chin. Continue pulling until the extractor reaches the front of the jaw, then rotate the puller about 90 degrees to break the lower jaws apart at the chin. The jaw is then free and can be pulled out.
- e. After the jawbone has been removed, scrape any remaining meat from the bone and dry with a paper towel or cloth. The next step is to label the jawbone with the corresponding deer number (e.g., 01, 02, etc.) from your harvest data sheet. The best way to mark the jawbone is by writing the number directly on the bone with a black, indelible marker. You can also mark the jawbone by writing the deer number on a paper or metal tag and **SECURELY** attaching the tag to the jawbone. Make sure the tag will not come off before it can be sent to your biologist.
- f. Once the jawbone has been cleaned and marked, it should be placed in a secure, dry storage container. Any type of container can be used as long as it will allow air to circulate around the jawbones and will keep varmints from dragging the jawbones off. One of the best containers to use is a collapsible, metal fish basket. These baskets allow the jawbones to air dry and can be hung underneath a skinning shed or in a camphouse out of the weather. Whatever type of container you use, make sure it stays dry and is accessible to everyone hunting on the property. **NEVER** store jawbones in a refrigerator, freezer, or plastic bags. This causes the jawbones to rot and may cause your biologist to send them back to you for further cleaning.

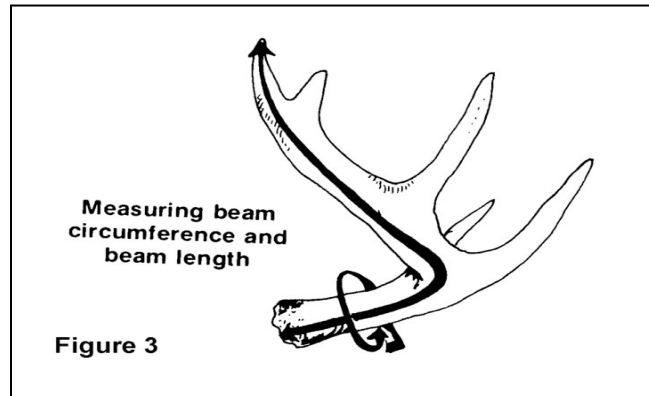
2. **HARVEST DATE:** Record the month and day of harvest for each deer.
3. **SEX OF DEER:** Record "M" for bucks and "F" for does.
4. **WEIGHT:** Weigh all deer on good, accurate scales. Do not guess at the weight. Scales should be checked for accuracy every so often by weighing something of known weight (e.g., 1 or 2 bags of fertilizer or seed). If they are off, calibrate the scales so accurate weights are taken. Weights may be recorded as LIVE WEIGHT or as DRESSED WEIGHT. Live weight is the weight of the deer on the hoof, with all his body parts still intact. Dressed weight is the weight of the deer after field dressing (i.e., removal of intestines, stomach, liver, lungs, heart, etc.). Either weight is acceptable, just make sure it is in the correct column. Record weights to the nearest pound, not to the nearest 5 or 10 pound increment.
5. **MILK PRESENT:** Check all female deer to determine if they are lactating or "in milk". Do this by cutting into the udder or bag. Record "Y" on the data sheet if there is even a small amount of white or brown liquid present. Record "N" if no liquid is present.
6. **ANTLER MEASUREMENTS:** Measurements should be taken from the left and right antlers on all bucks harvested. Any abnormalities (e.g., broken main beams, multiple main beams, etc.) should be recorded in the comments section. "Button bucks" (male fawns with soft, hairy knobs) should not be measured. Take measurements only from bucks with hardened, bony antlers.

- a. **Antler Points** - Count the number of points on both antlers and record on data sheets. To be counted, a point must be at least 1-inch long (see **Figure 2**). If some points are broken off at the main beam, make a note of how many appeared to be broken off on each side in the comments section (e.g., 2 points broken off on left side).

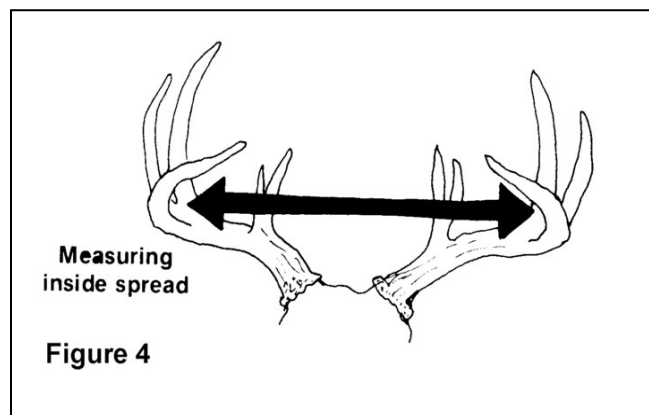


b. **Beam Circumference** - Measure circumference on the main beam, half way between the burr and the brow tine (see **Figure 3**). If no brow tine is present, measure circumference about 1-inch above the burr or base.

c. **Beam Length** - Measure from the burr to the antler tip, along the outside of the main beam (see **Figure 3**). If a significant amount of the main beam appears to have been broken off, make a note of this in the comments section (e.g., left beam broken off).



d. **Inside Spread** - Measure at the widest point between the inside of the main beams. This should be done at right angles to the center line of the skull (see **Figure 4**). If one or both of the main beams are broken off, do not record an inside spread.



7. **COMMENTS/HUNTER NAME:** Use this space to record the hunter's name and/or comments about the deer, such as missing or broken antlers.

Circumstances sometimes arise that keep hunters from getting all data from every deer killed. If this happens, get as much **GOOD DATA** as possible and try to do better on the next deer. One thing to remember – it is better to collect a little less than 100% of good data than to collect 100% of poor data. Collecting harvest data should not be viewed as a chore, but rather an integral part of managing and improving your deer herd.





## INSTRUCTIONS FOR COLLECTING OBSERVATION DATA

In addition to deer harvest data, hunter observation data provides valuable information about a deer herd. Things such as adult sex ratio, forked antlered to spike antlered ratios, fawn to doe ratios, age structure of the buck population, and fawn recruitment can all be estimated using hunter observation data. Other things of interest to hunters, such as time of day deer when most deer are observed, ratio of food plot hunts to woods hunts, and weeks of increased deer sightings all can be documented with observation data. Collecting this type of data is straightforward. Some suggestions on how to collect and record observation data are discussed below:

1. **DATE:** Record the date of the hunt.
2. **NUMBER OF HOURS HUNTED:** Record the total number of hours spent hunting. This should only include the time in a stand or walking to or from a stand. Do not include driving time or time spent hanging around your vehicle or the sign-in area. Record the time to the nearest  $\frac{1}{2}$  hour. For example, 2.5 hours, 3 hours, etc.
3. **AM/PM:** Record the time of day the hunt occurred. If the hunt took place before 12:00 noon (e.g., 6:00 am to 10:00 am), record **AM**. If the hunt took place after 12:00 noon (e.g., 2:00 pm to 5:30 pm), record **PM**. If the hunt lasted all day, record **AM/PM**.
4. **DEER OBSERVED:** Hunters should record all deer observed while actually hunting (see **NUMBER OF HOURS HUNTED**). Do not record deer observed driving to or from the stand. Also, do not record deer that are heard, but not seen.
  - a. **ANTLERLESS DEER:** All deer without antlers, except 1- $\frac{1}{2}$  year old button bucks, should be recorded in this category. All does 1- $\frac{1}{2}$  years old and older should be entered in the **ADULT DOES** category. All deer born this year, including buck fawns with buttons, should be recorded in the **FAWNS** category. If the deer does not have antlers, but its age is not determined, record it in the **AGE UNKNOWN** category.
  - b. **ANTLERED BUCKS:** Only bucks with hardened antlers should be recorded in this category. Bucks should be recorded as **SPIKES** (only one point per side) or **FORKED** (at least one antler with more than one point). Buck fawns (deer born this year) should not be recorded in the antlered category even if they have

buttons protruding through the skin. These deer should be easy to identify due to their small body size. Yearling (1-½ year old) bucks with buttons only should be included in the **SPIKE** category. If an antlered buck is observed, but the number of points cannot be counted, record the deer in the **SIZE UNKNOWN** category.

- c. **UNIDENTIFIED:** All deer that cannot be positively identified as **ANTLERLESS DEER** or **ANTLERED BUCKS** should be recorded in this category. Do not assume all deer not positively identified are **ANTLERLESS DEER**. Also, do not assume all big-bodied deer not positively identified are **ANTLERED BUCKS**.
- d. **TOTAL DEER SEEN:** Record the total number of deer seen while hunting. Do not record deer that are only heard and not positively identified as a deer.

5. **ESTIMATED AGES OF FORKED ANTLERED BUCKS:** Record the estimated ages of all forked antlered bucks observed. Ages should be recorded as 1.5, 2.5, 3.5, etc. Estimate age using antler size and other physical characteristics.

6. **WOODS OR FOOD PLOT:** Record where the hunt occurred. If the hunt was over or within sight of a food plot, record **FOOD PLOT**. If the hunt was in a wooded area, clearcut, woods road, or any other area other than a planted food source, record **WOODS**.

7. **HUNTER'S NAME:** Record the name of the hunter. If two or more people are hunting together in the same stand, only record one set of observations.

The most convenient way to record observation data is to leave an observation log for all hunters to fill out at the area where stands are signed out. Hunters can record all of the observation data when they return from a hunt. Some hunters do not want others to know what they saw while hunting. In these situations, hunters may choose to keep a season long tally of the deer observations and turn it in at the end of the season. Other groups choose to record observations on cards and then deposit the cards in a locked box with very limited access.



## **Tips for Aging Antlered Bucks on the Hoof**

Although antler characteristics are commonly used, hunters can look for certain body size and shape characteristics to more accurately assess age in older bucks.

### ***1-½ year old buck***

- Resembles doe with antlers
- Does not have swollen neck or muscular characteristics
- Body is thin and lanky and legs look long
- Often enters feeding areas earlier and tends to travel with doe family groups

### ***2-½ year old buck***

- Typically has a much larger build than a doe
- Still visibly underdeveloped or not “filled-out”
- Limited amount of neck swelling during the rut
- Waist is still thin

### ***3-½ year old buck***

- Still a distinct junction between the neck and shoulders
- Thickly muscled neck during the rut
- Chest appears deeper than hindquarters, giving the appearance of a well-conditioned race horse

### ***4-½ year old buck***

- Has attained almost all of the adult body mass
- Fully muscled neck blends with shoulders
- Waistline is as deep as the chest

### ***5-½+ year old buck***

- A fully mature buck has a very distinct look – You’ll know it when you see it!!
- Front half of the body (neck, shoulders, and chest) blends together
- Legs appear shorter than legs of younger bucks because of thicker chest
- Swayed back and sagging belly
- Battle scars (torn ears, scratches, puncture wounds, etc.) are common

## **Tips for Avoiding Button Bucks**

Hunting clubs often encounter problems when they first implement a buck restriction and start focusing on antlerless harvest. One of the big problems that often shows up when a group first begins harvesting significant numbers of antlerless deer is the accidental harvest of button bucks. Many times, button bucks or buck fawns end up being a large percentage of the overall antlerless harvest on these places new to harvesting antlerless deer. Many yearling bucks with small antlers also get shot because hunters are not careful enough when picking out a deer they think is a doe. These young bucks are adventuresome and are often the first deer seen during a day of hunting.

1. Establishing minimum antler dimensions for buck harvest is an easy way to reduce the number of young antlered bucks in the harvest. It is more difficult teaching someone how to distinguish buck fawns from does. The following are some simple guidelines for antlerless deer harvest which appear in the book "Quality Whitetails--The Why and How of Quality Deer Management". These guidelines are not set in stone, so exceptions are likely to occur. Regardless, they should help the conscientious hunter differentiate between one of these young bucks and a "shooter" doe.
2. Size and shape are important clues to identifying adults and youngsters. An adult doe has a long face and neck and is basically rectangular in shape. Fawns have short faces and necks and appear squarer. Compare these two descriptions with luggage--a suitcase is rectangular and the smaller brief case is square. The face of an adult doe could compare with a 12 oz. drink bottle and a fawn would match a 6 oz. bottle.
3. Avoid harvesting "lone" antlerless deer. Wait until other deer arrive to provide comparisons. During the fall, lone deer often are button bucks that have become separated from their dam because of rutting activity, hunter activity, or normal dispersal patterns. During the peak of the breeding season, it is common to encounter small groups of temporarily abandoned fawns. If all deer appear similar in size, wait for a behavioral clue.
4. When deer are traveling in single file between feeding and bedding areas, their positions are often determined by social status and thus age. The lead doe often is the correct one to take. Be careful when hunting food plots, however, as button bucks often will enter the field first.
5. When spooked, deer frequently will return to satisfy their curiosity. They will circle the "problem" to get downwind so they can confirm whether danger exists. With few exceptions, the dominant doe will initiate and lead the investigation.
6. When watching antlerless deer, pay attention to the dominant animal that holds its ears back and rushes other deer. Often the front legs are used to strike or flail subordinate animals. Fawns often buck and chase. Watch for aggressive adult body postures and adolescent behavior.

7. Hunt antlerless deer as early in the season as legally permitted. Late in the season, there is less of a size difference between adult does and button bucks. Button bucks are more adventuresome as they get older, but they are still careless and inexperienced.
8. Don't shoot in poor light during the early morning or late afternoon, don't take long-distance shots, and avoid a moving target, especially when other deer are nearby.
9. The bottom line in harvesting antlerless deer is this: ***When unsure, give the animal the benefit of the doubt.***

# Field-Judging Live White-tailed Bucks & Does

Quality Deer Management (QDM) is a widely recognized and effective strategy designed to produce quality habitat, quality deer and a quality hunting experience. Two of the most important principles of QDM involve voluntary restraint in harvesting younger bucks and implementing an adequate harvest of does, practices that require accurate estimation of buck and doe ages in the field. Antler and body characteristics are most commonly used to estimate the age of live bucks. These characteristics vary throughout the whitetail's range, but when used in relation to local standards, age estimation greatly improves. Estimating the sex and age of live antlerless deer is critical for collecting reliable observation data and for any QDM program that involves selective doe harvest and protection of buck fawns. The ability to separate live antlerless deer into fawns and adults is necessary for any successful antlerless harvest program.



This educational poster was developed by the Quality Deer Management Association (QDMA), the Alabama Division of Wildlife & Freshwater Fisheries, the Alabama Wildlife Federation, and the Alabama State Chapter of QDMA to assist Alabama deer managers with sound deer harvest management decisions.

For more information on Quality Deer Management or becoming a member of the QDMA, call (800) 209-3337 or visit [www.QDMA.com](http://www.QDMA.com)

Information compiled by Jeremy Meares, Quality Deer Management Association, Copyright 2001.

## Buck Age and Antler Growth



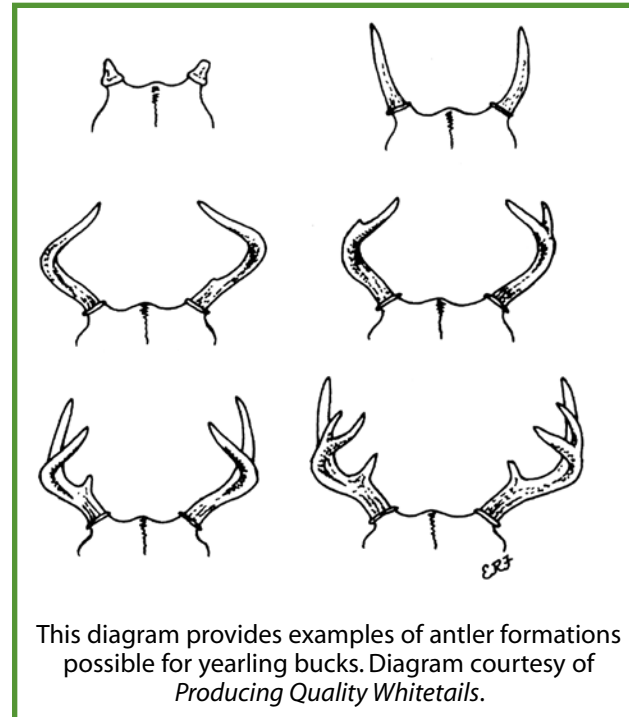
Photos: Charles J. Alsheimer

Average antler characteristics for whitetail bucks increase rapidly from 1.5 to 4.5 years of age, with additional increases in some areas between 5.5 and 7.5 years of age. Bucks like this one from New York (above) and this one from Mississippi (below) are good examples of what can be achieved when bucks are allowed to reach at least 4.5 years of age in high quality habitats.



Photos: Dr. Harry Jacobson

## Antler Characteristics



This diagram provides examples of antler formations possible for yearling bucks. Diagram courtesy of Producing Quality Whitetails.

### Antler Points

- Not a reliable predictor of age in high-quality habitats because yearling bucks can produce 6, 8, or even 10 antler points (see above). In poor-quality habitats, however, antler points may be an effective selection criteria. QDMA recommends seeking professional advice before implementing any antler restriction.
- Use both frontal and side views to get a full count of antler points.
- From the side, count the number of points projecting upward from the main beam. Two upright points on each side mean the buck will likely have 8 points (assuming it has both brow tines). Three upright points mean the buck will likely have 10 points.

### Beam Length

- A relatively good predictor of age, but difficult for most hunters to judge.
- Best determined by a side view.
- A mature buck's antler tip will typically extend beyond the eye. Beams extending to the tip of the nose are generally 20 or more inches in length.

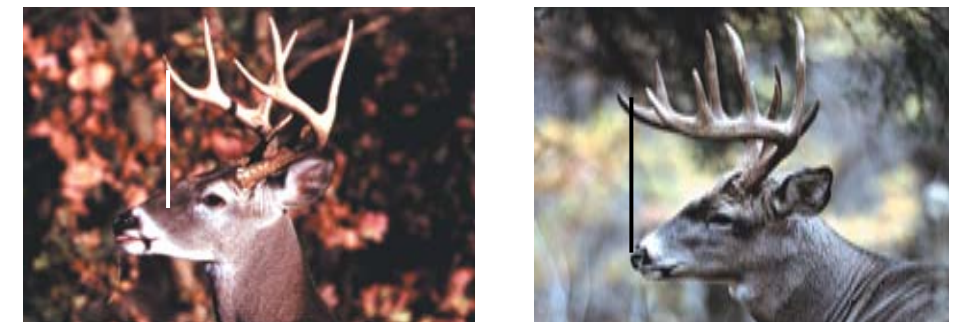


Photo: Left-George Barnett; Right-Charles J. Alsheimer

### Antler Spread

- Yearling bucks rarely have outside antler spreads greater than 14 inches.
- Tip-to-tip distance between the ears in a relaxed or semi-alert position is about 13 to 14 inches for yearling and 2.5-year-old bucks and about 15 inches on bucks 3.5 years old and older.



Photo: George Barnett

Based on ear width criteria outlined above, the buck at left has an outside antler spread of approximately 14-15 inches. The buck at right has an outside antler spread of approximately 19-20 inches.

## Buck Body Characteristics by Age Class

### 1.5-Year-old Bucks

- Resemble does with antlers.
- Do not have swollen necks and muscular characteristics.
- Often enter feeding areas earlier and tend to travel with doe family groups.



Photo: Bill Leo

### 2.5-Year-old Bucks

- Relatively thin waist and shoulders.
- Limited neck swelling during the rut.

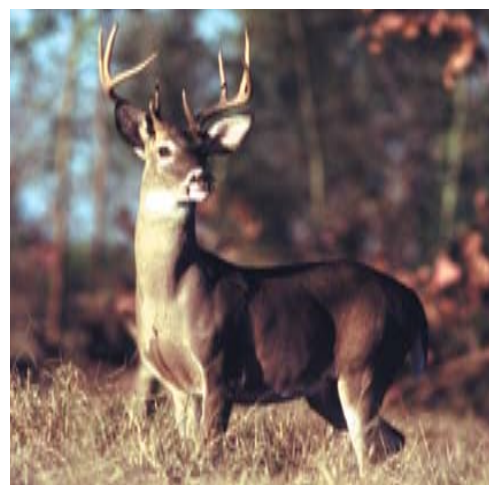


Photo: George Barnett

### 3.5-Year-old Bucks

- Thickly muscled neck during the rut, although there is still a distinct junction between the neck and shoulders.
- Chest appears deeper than the hindquarters giving appearance of a well-conditioned racehorse.



Photo: Bill Leo

### 4.5-Year-old Bucks

- Fully muscled neck blends into the shoulders, and waist is deep as chest.
- Show "attitude" in the presence of other bucks.
- Activity more nocturnal.



Photo: Charles J. Alsheimer

### 5.5-6.5-Year-old Bucks (Mature)

- Neck blends completely into shoulders and front of body appears to be one large mass.
- Most exhibit prominent potbelly.
- Often have "squinty" eyes and "battle scars."

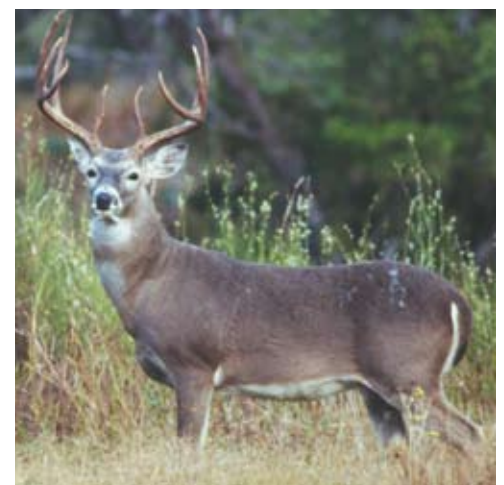
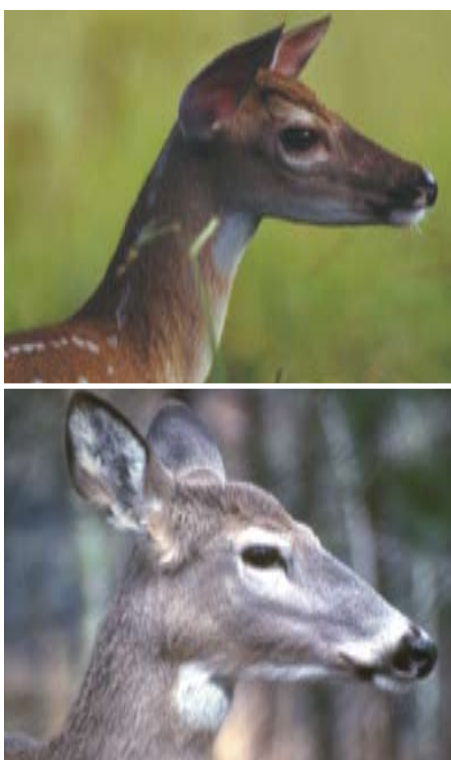


Photo: Wyman Meinzer

## Judging Antlerless Deer (does and fawns)



Top left photo by George Barnett

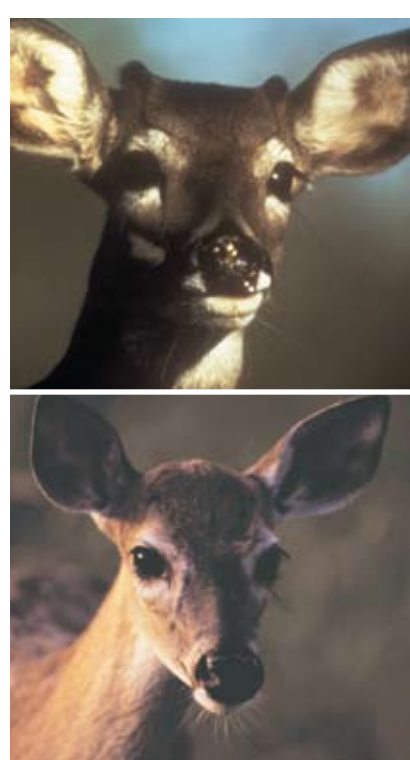


### Fawns

- Short nose and forehead
- Ears appear larger in comparison to its head
- Head similar in shape to an 8-oz. drink bottle

### Adults

- Longer nose and forehead
- Head similar in shape to a 16-oz. drink bottle



Photos: Top-Wyman Meinzer; Bottom-George Barnett

### Separating Buck Fawns from Doe Fawns

#### Buck Fawn:

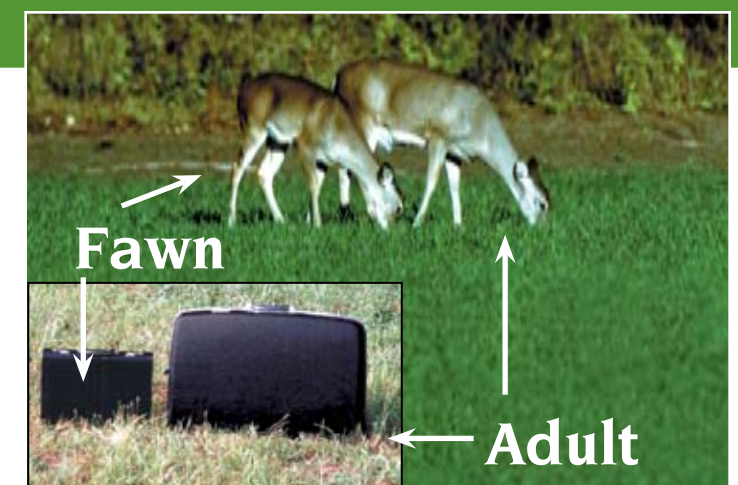
- Look for presence of developing antlers
- Head appears flatter and less rounded

#### Doe Fawn:

- No developing antlers
- Head appears rounder

### Helpful Tips

- Never harvest a lone antlerless deer. Often these are buck fawns. Wait until several antlerless deer are present before making a harvest decision.
- Never harvest antlerless deer in low light, at long distances, or where a positive identification cannot be made.
- Always use binoculars when determining the sex and age of antlerless deer.
- Always give the animal the benefit of the doubt if there is any uncertainty regarding sex or age.



### Fawns

- Have short, square bodies (look like a "briefcase" from a distance)
- Have short necks and less muscle development
- Rarely have swaying backs or sagging bellies

### Adults

- Have larger, rectangular-shaped bodies (look like a "suitcase" from a distance)
- Have long necks
- Often have swaying backs or sagging bellies

In areas with extended fawning and hunting seasons, hunters may encounter fawns ranging from 2-7 months of age. The fawn in photo A is approximately 1-2 months old; B: 2-3 months old; C: 4-5 months old, and; D: 6-7 months old. Despite the differences in size, the overall body shape (square) and short head and snout are still evident in each photo.



### Typical Fawn Behavior

- Playful, naive, inquisitive
- Buck Fawn: more aggressive, and tends to be the first antlerless deer seen

### Typical Adult Behavior

- Hold ears back displaying aggressive behavior
- Stand on hind legs and "flail" subordinate deer (as seen in the photo)
- Often the lead deer when a group of antlerless are traveling together.

