# 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

Figure 1
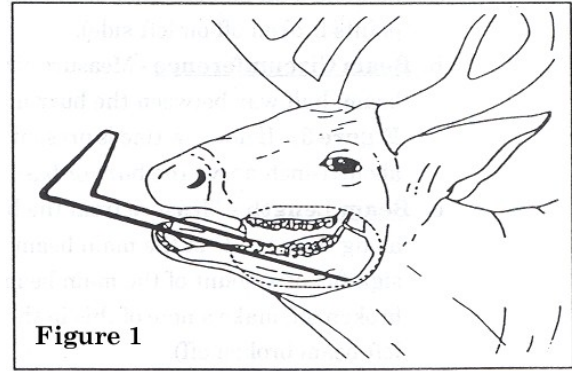
jawbone. Once the extractor is around the jawbone, place one foot on the deer's neck and pull the extractor towards the deer's chin. Continue pulling until the extractor reaches the front of the jaw, then rotate the puller about 90 degrees to break the lower jaws apart at the chin. The jaw is then free 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).

Count only points 1 inch or longer
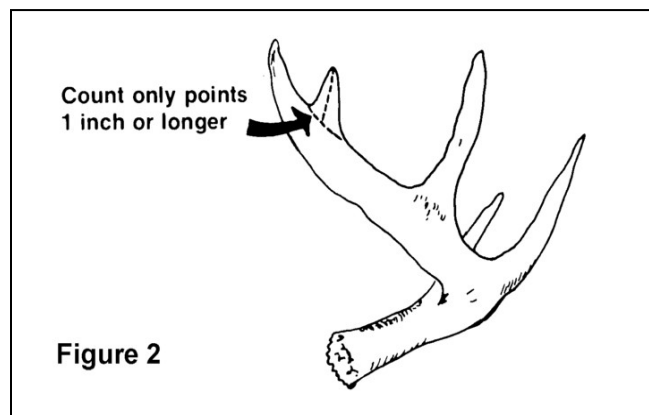
Figure 2

b. <u>**Beam Circumference**</u> - 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.

Measuring beam circumference and beam length

Figure 3

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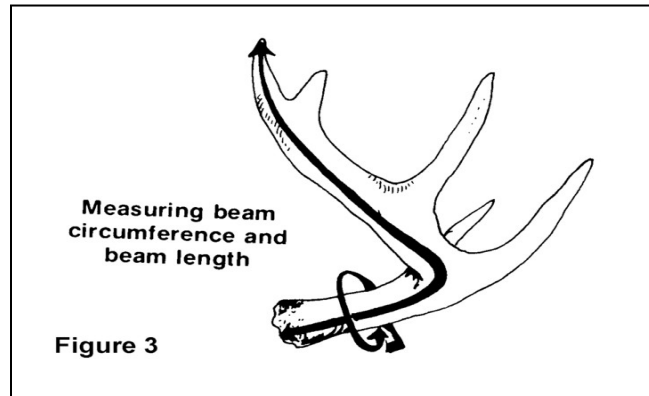
d. <u>**Inside Spread**</u> - Measure at the widest point between the inside of the main beams. This should be done at rights angles to the center line of the skull (see **Figure 4**). If one or both of the main beams are broken off, do not record an inside spread.

Measuring inside spread

Figure 4
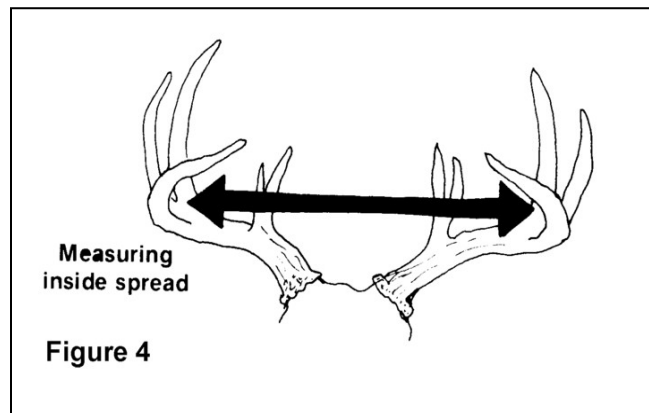
7. COMMENTS/HUNTER NAME: Use this space to record the hunter's name and/or comments about the deer, such as missing or broken antlers.

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.

DEER KILL RECORD SHEET

Hunting Club _____   Year _____

Deer Number	Age	Harvest Date		Sex	Weight		Milk Present	Antler Measurements						Gun or Bow	Hunter's Name/Comments
		Month	Day	Male/Female	Live	Dressed	Y/N	# of Antler Points	Basal Circumference (inches)		Main Beam Length (inches)		Inside Spread (inches)		
									Left	Right	Left	Right			
Example	3 1/2	11	23	M	180			8	4 1/4	4 1/8	20 1/2	20	17 3/4	Gun	Joe Smith
Example	2 1/2	11	23	F		85	Y							Gun	Jim Brown

DEER KILL RECORD SHEET

Hunting Club _____ **Year** _____

Deer Number	Age	Harvest Date		Sex	Weight		Milk Present	Antler Measurements						Gun or Bow	Hunter's Name/Comments
		Month	Day	Male/Female	Live	Dressed	Y/N	# of Antler Points	Basal Circumference (inches)		Main Beam Length (inches)		Inside Spread (inches)		
									Left	Right	Left	Right			

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 ½ 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 1-½ year old button bucks, should be recorded in this category. All does 1-½ 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.

HUNTING CLUB _____   **YEAR** _____

DATE	NUMBER OF HOURS HUNTED	AM/PM	ANTLERLESS DEER			ANTLERED DEER			UNIDENTIFIED DEER	TOTAL DEER SEEN	ESTIMATED AGES OF FORKED ANTLERED BUCKS	WOODS OR FOOD PLOT	HUNTER'S NAME
			ADULT DOES	FAWNS	AGE UNKNOWN	SPIKES	FORKED	SIZE UNKNOWN					