

# ***TRUEFLIGHT FEATHERS***

## **Fletching Guide**

### **What size feathers should I use?**

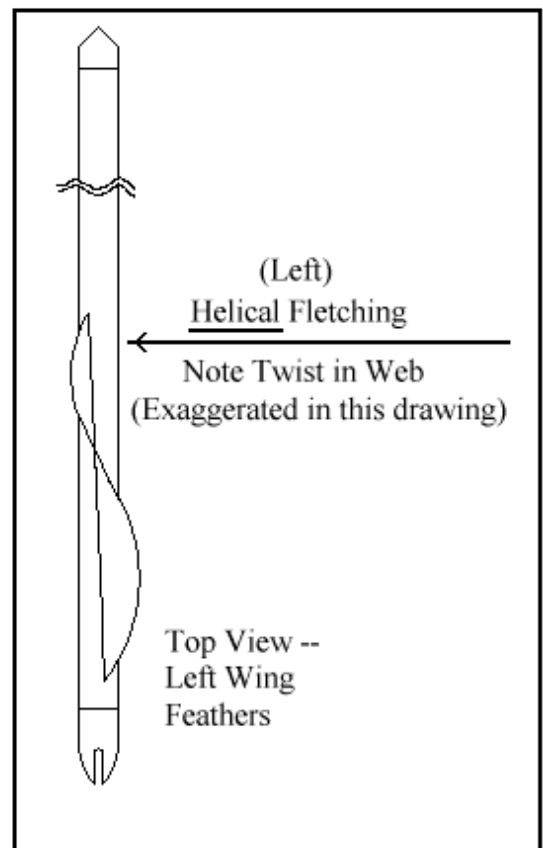
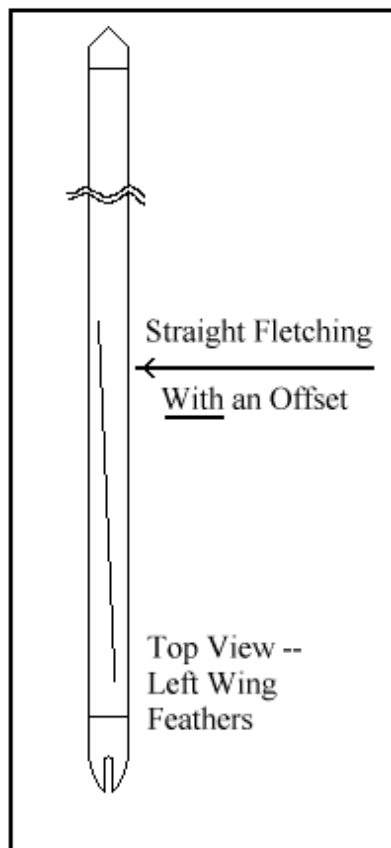
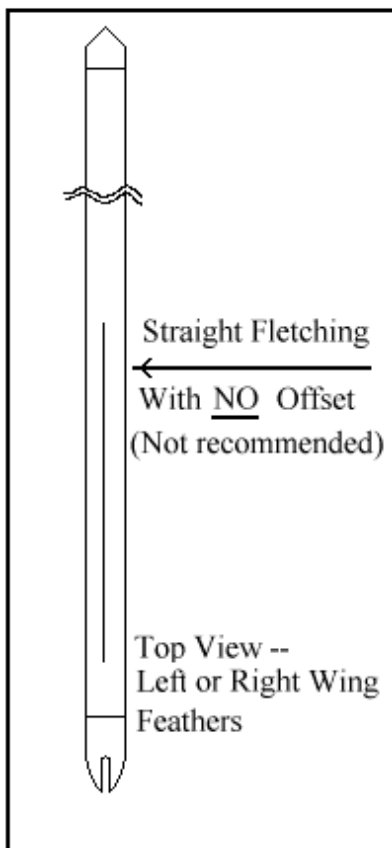
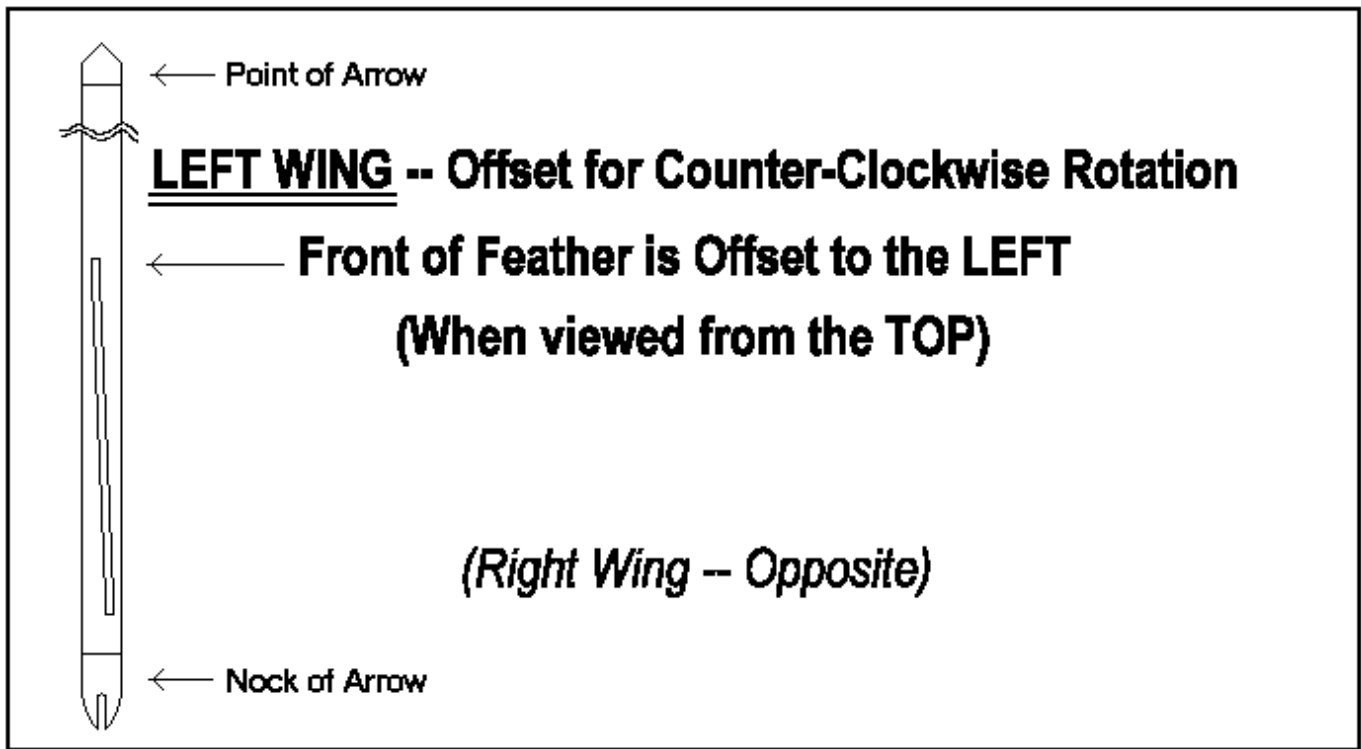
In general, for hunting arrows tipped with broadheads, we have found three 5 inch feathers or four 4 inch feathers work well. Light weight carbon arrows have been successfully fletched with three 4 inch feathers. Due to individual differences in equipment and shooting style, larger feathers may be required. It is also possible that good flight can be achieved with smaller feathers. Test shooting is the best way to decide on any particular set up.

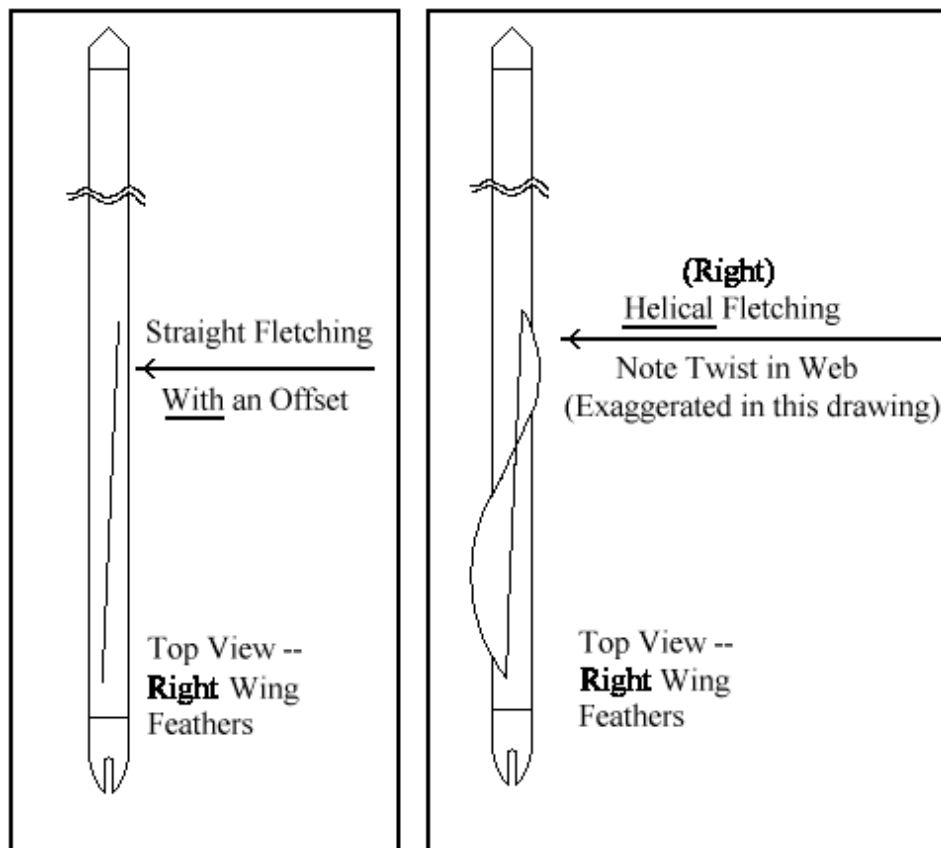
It is important to remember that broadheads will need more guidance than field points. It is also extremely important that broadhead equipped arrows fly "dead straight" with no yawing or fishtailing. An arrow that is yawing down range is not only inaccurate, but if it hits game it loses much of its penetration.

### **I'm right handed, should I use right wing or left wing feathers?**

You can successfully shoot either wing. An arrow does not rotate noticeably until it is well clear of the bow.

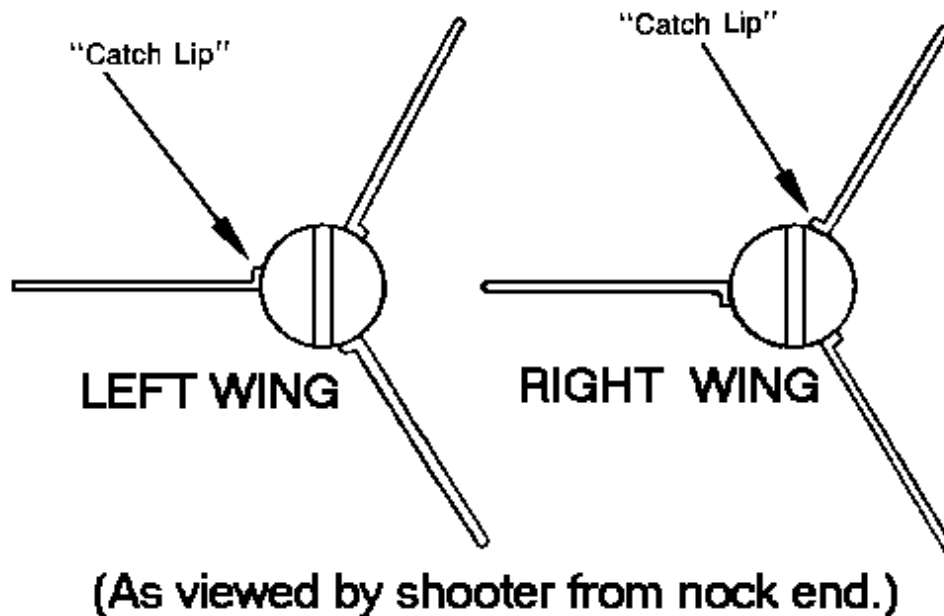
Left wing feathers should be used to rotate the arrow counter clockwise, right wing clockwise (as viewed by the shooter).





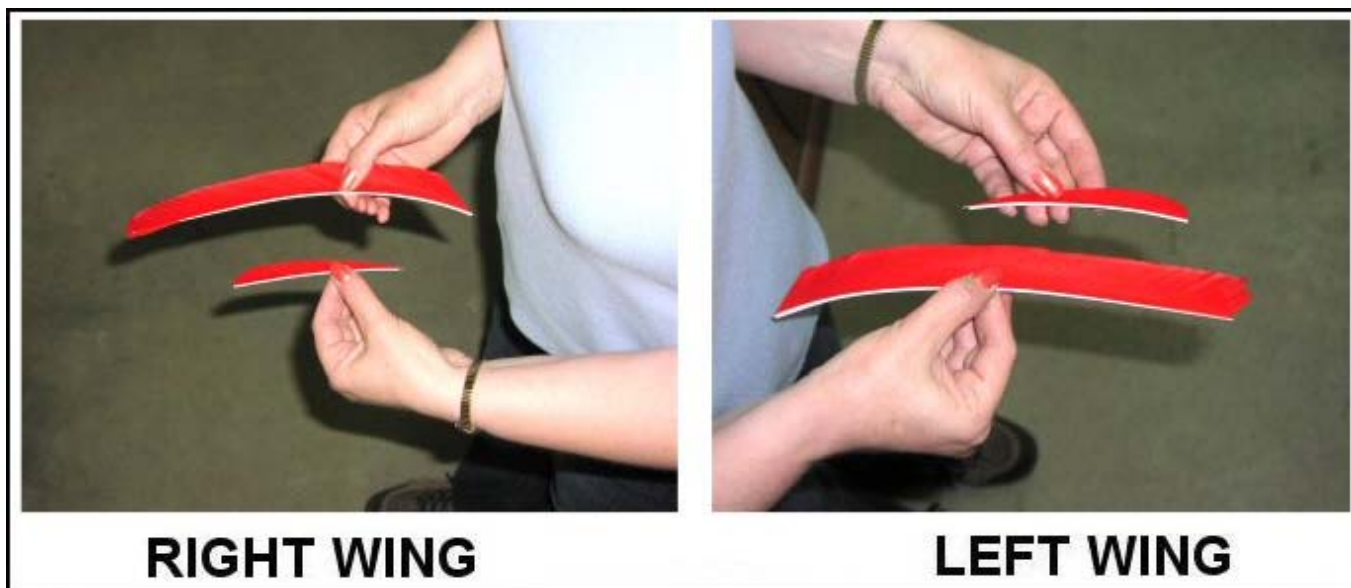
### How can I tell if my feathers are right or left wing?

First method: Look at the nock end of an arrow (as though it is about to be shot), and rotate it so that one fletching is on top of the shaft. If the "catch lip" is to the left of the web, it is a right wing feather. If the "catch lip" is to the right of the web, it is a left wing feathers (see diagram).



(As viewed by shooter from nock end.)

Second method: Hold the forward end of a diecut (pointed end) or full length feather (large end) toward yourself. Look down from the top. Rotate the feather so that its web is horizontal and its natural curve droops the end pointed away from you downward ("shedding rain" as opposed to "catching rain"). If the web is to the right of the quill base, it is a right wing feather. If the web is to the left of the quill base, it is a left wing feather.



**Should I use RIGHT wing with a RIGHT helical clamp, and LEFT wing with a LEFT helical clamp?**

Yes. **RIGHT** wing for a **RIGHT** helical clamp. **LEFT** wing for a **LEFT** helical clamp.

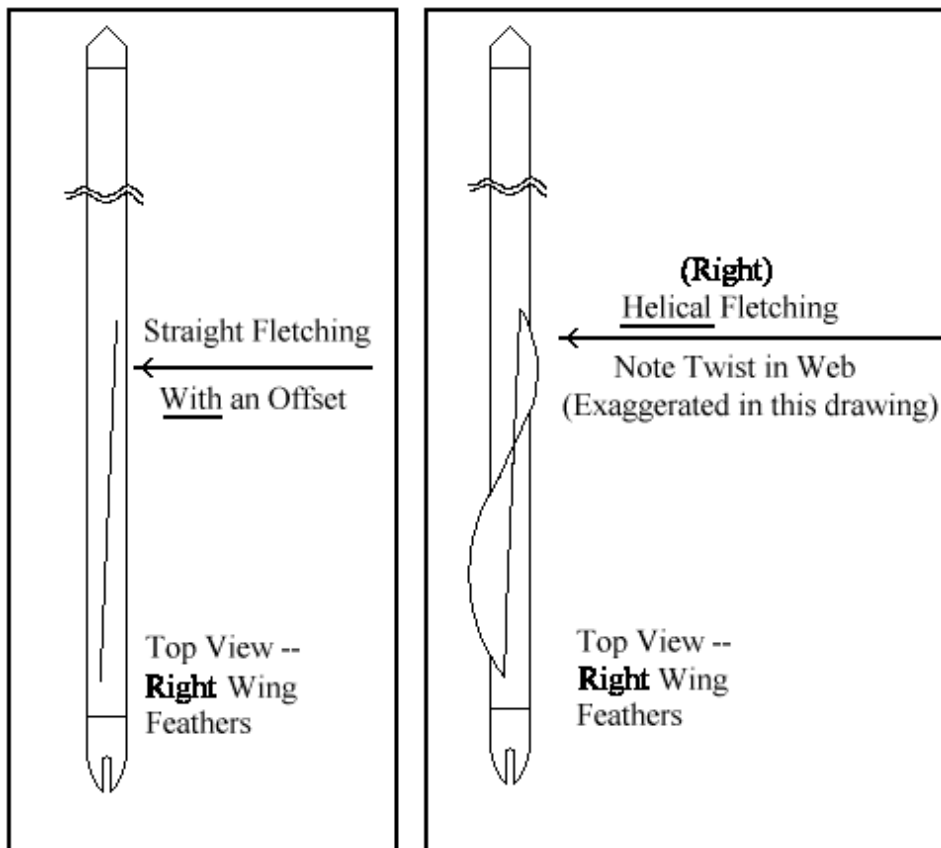
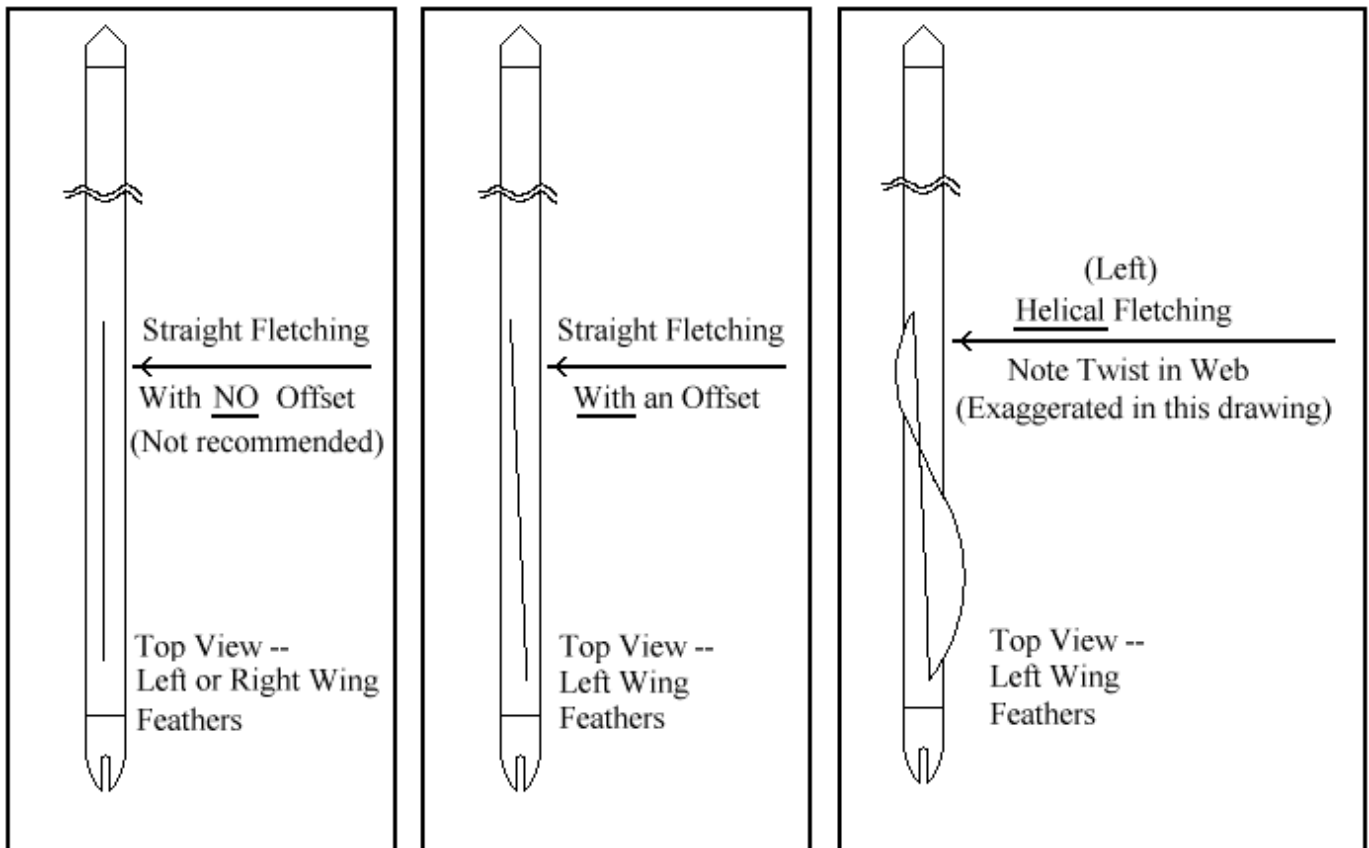
**Should I use straight, offset or helical fletching clamps?**

We strongly recommend offset or helical fletching on all arrows.

Offset or helical fletching causes the arrow to rotate in flight just like the rifling in a gun barrel causes bullet to rotate. This is extremely important. The rotation acts like a gyroscope to stabilize the arrow. This rotation also "averages out" any slight microscopic imperfections in the arrow.

This advantage was reportedly first noticed in smooth bore muskets, shooting round lead balls. The smooth bores were accurate to about 50 yards. However simply adding rifling to the barrel (or even angled scratches inside the barrel!) caused accuracy to improve enough so that the accurate range became 150 yards. This increase was apparent even when shooting the same round lead balls.

Helical fletching offers more stability than a simple offset and is therefore the first choice for any arrow tipped with a broadhead.



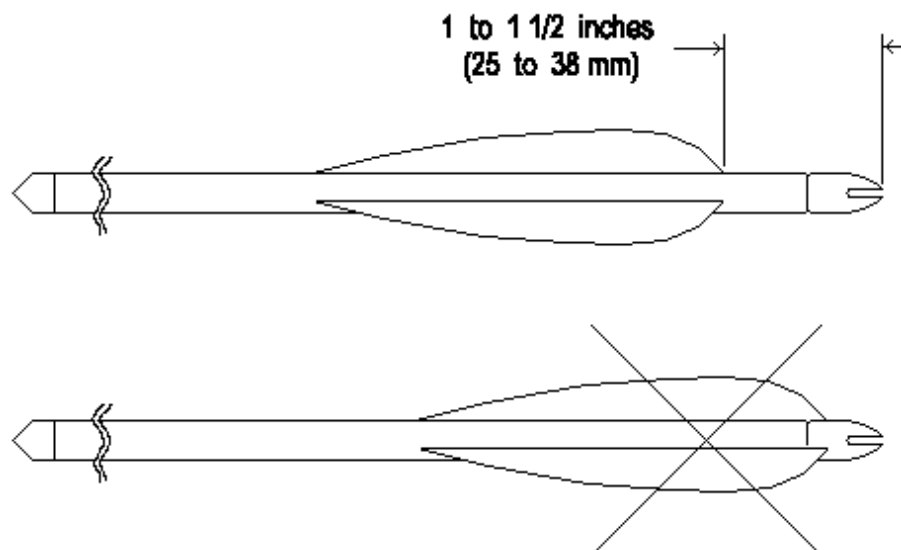
### How much fletching offset should I use?

If the forward end of a 5 inch feather is 1/16 inch offset from the rear, this equals about 3/4 of one degree. We find this works well for most offset or helical fletched arrows

## How far forward from the rear of the arrow should I place the feathers?

The rear of the feathers should be far enough forward to clear the shooters fingers or release mechanism when releasing the string. For finger shooters this is usually about 1 to 1 1/2 inches or 25 to 38 mm.

The feathers should also be far enough forward so that their bases can be securely attached to the shaft, not the nock.



All else being equal, the further to the rear the feathers are, the more efficient the guidance. The feathers should not be any further forward than is necessary for clearance.

## Do "Round Back" (or "Parabolic") and "Shield Back" fly differently?

We haven't been able to detect any difference in the performance of round back or shield back. It appears that the only difference is one of appearance. Round back are more popular in the United States; shield back are more popular in Europe.



Round Back (or Parabolic)



Shield Back

## What adhesive should I use to fletch feathers?

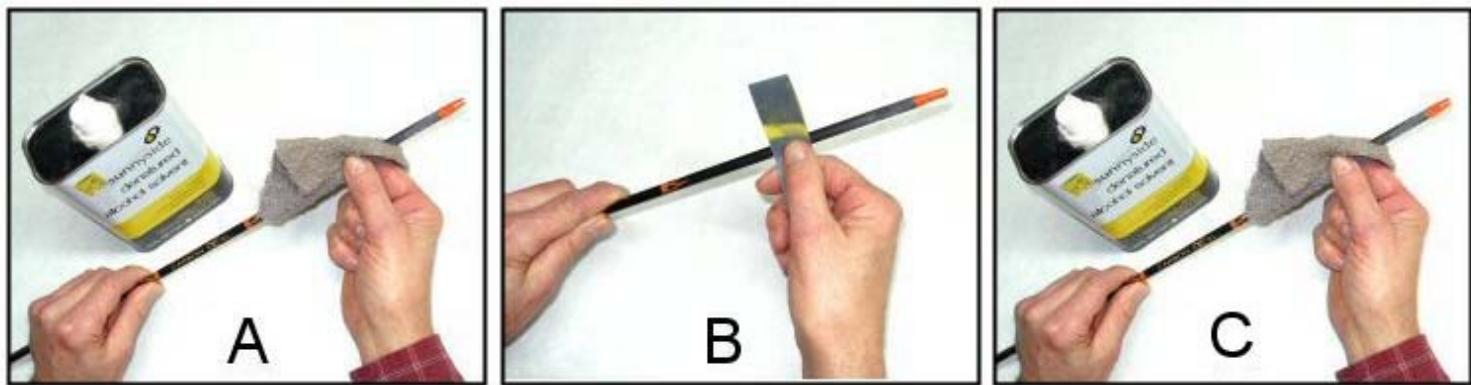
Any good fletching adhesive will work well with feathers.

Instant fletching glues are available, and very convenient "feathers fletching tape" has just come on the market. All work very well with feathers.

## How should I prepare the quill base of the feather for fletching?

The base of every "Trueflight Feather" is ground clean and dry in our processing. No further preparation is needed.

## How Should I Prepare The Shaft For Feather Fletching?



We normally begin by wiping the fletching area of the shaft with alcohol, then lightly scuff the area with 600 grit sandpaper or fine steel wool. We do a final alcohol wipe a few minutes before fletching.

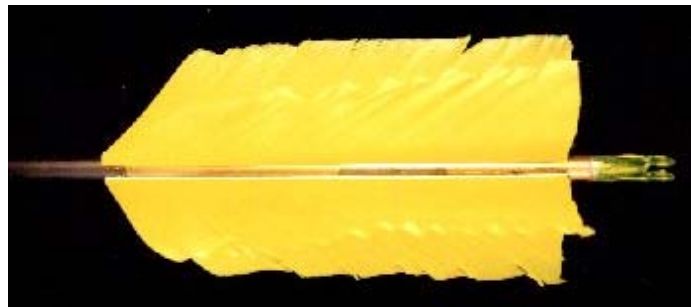
### What is a “Flu-Flu” arrow?

A “Flu-Flu” arrow is an arrow which has extra large fletching area for extra drag. These arrows are typically used for shooting at aerial targets. The idea is that the extra fletching slows the arrow rapidly after 30 yards or so. With a “Flu-Flu” arrow, you can shoot upwards without your arrow winding up in the next town!

### How can I make a “Flu-Flu” arrow?

There are 2 basic methods:

1) Use a standard fletching jig to fletch 6 (or more!) 6 inch long feather sections clipped from full length feathers, with their web left full height. The extra high web of the feather can be temporarily “squashed” in the clamp when they are fletched. A conventional 3 fletch jig can do a six fletch by simply first doing a regular 3 fletch, then removing the arrow, rotating 180 degrees and placing back in the jig to fletch 3 more feathers. We recommend a straight clamp with some offset, or a helical clamp, for even more drag.



**Example of type 1 Flu-Flu fletching**

2) Another type of “Flu-Flu” can be made by wrapping 2 or more full length feathers in a spiral around the fletching area of an arrow. We like to use “Contact Cement” as the adhesive for these arrows. Simply paint the glue on the fletching area of the arrow and base of the feather, let dry for 10 minutes, then “eyeball” wrap the spiral on the arrow. Use more than 2 feathers for more drag. Use contrasting colored feathers for a really interesting arrow.

[Click here for complete instructions to make this kind of flu-flu.](#)



**Example of type 2 Flu-Flu fletching**

### **Can I really hit a FLYING target... in the air?**

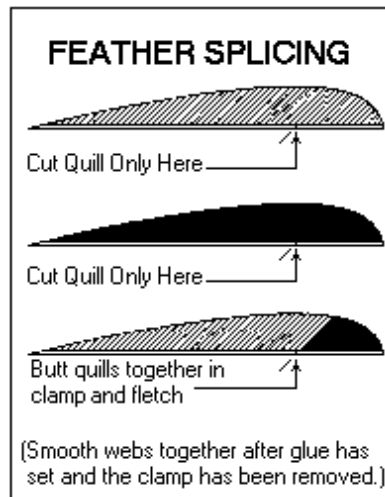
Yes, it is more possible than you might think. Have a friend standing near you toss a foam disc target, or even a 1 gallon plastic milk jug (with a bit of sand for extra weight). Start with close ranges. Have your friend toss the target about 20 feet ahead and above you to start. Don't count on using a sight! This is instinctive shooting at it's best.

### **What is "Feather Splicing"?**

Feather Splicing is a way of joining 2 or more pieces of feather (usually of contrasting color) resulting in a very attractive "two tone" fletching. For example, many archers like to add a bright feather piece to the rear of their fletching to act as a high visibility tracer. (See [examples](#))

### **Is "Feather Splicing" hard to do?**

Not really! One simple method is to start with 2 die cut feathers, of different colors. Cut each quill (lower base of the feather) the same distance back. The web of each cut feather will easily separate (nature's own velcro!). Next butt the quill of the front of one die cut against the quill of the rear of another as they are put into your fletching clamp. Glue normally. When the glue sets, remove the clamp and smooth the webs together (nature's velcro again!)



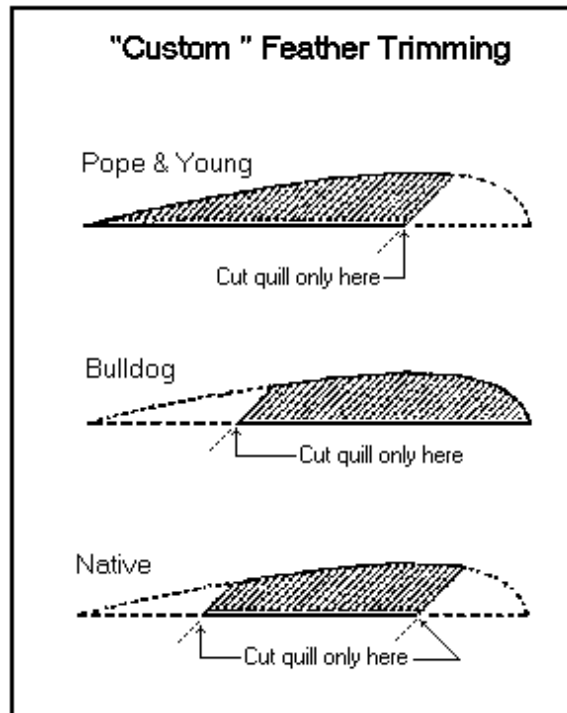
Another method of splicing is to fletch 2 or more sections of "full length" feather pieces, then cut or burn the final shape with a feather burner.

### **How can I make my own custom shaped feather fletchings?**

One traditional way is to fletch sections of full length feathers (say 4 or 5 inches long), then when all sections are glued to the shaft, use a "feather burner" to trim them. The "Young Feather Burner" is still being sold -- check with your local dealer. A quicker method is to start with standard die cut feathers, then make a single cut through each quill. Discard one part of



the feather (the webs will unzip like velcro), and use the rest as an "instant" custom shape. Make the cuts on all feathers at the same distance from the nose or tail of the die cut for a matched set.



### How Can I Waterproof My Feathers?

Excellent dry powder waterproofing for feathers are now available. Bob Rightnour's "Fletch Dry" adds virtually no weight to an arrow, does not stiffen the feather web and does an amazing job of waterproofing.

If you are caught in the rain without any waterproofing, a small "baggy" can be slipped over the feathers until the arrow is ready to be shot.