My opinion on arrows:

After 5 years of selling the Liberty bow, I have formed some definite opinions on arrows.

There are only two bows that allow you to shoot light arrows, that is the High Country Bows and the Liberty One bow.

So take advantage of these facts and avoid state sales tax and shipping costs (if shipped with bow).

Many, very many people are missing out on what I feel is the correct bow/arrow combination.

Many feel that a heavy arrow is better for hunting. I do not, and here is why:

Advantages of a heavy arrow.

1) Heavy arrows make the bow more efficient by about 5%, so shooting a heavy arrow with a 60 lb bow is identical to shooting a light arrow at 63 lb. That is the heavy arrow's advantage.
2) The heavy arrow is also quieter than a light arrow.

Now for the advantages of a light arrow:

1) It is much faster and if you are off in estimating the yardage it does matter as much.
2) It has less arc and you can shoot through brush easier.
3) Less time to be affected by the wind.
4) It takes less time to get to the target, reduces possible animal jump.
5) You can take longer shots with your sights pin set up.
6) Penetration is only slight less and is not a factor.
7) The speed really impresses those watching. (Good for Sales Reps --YOU!)
8) It is more fun.

So take advantage of the Liberty bows 4 grain/lb arrow weight lower limit. Example;

A 60 lb Liberty can shoot a 4x60=240 gr. Arrow. A regular bow must have 5 grains per lb or else you void the warranty. Example 5x60= 300 gr. arrow is the lightest you can go.

The Liberty bow has the disadvantage of requiring a very stiff arrow (Bow draw lbs +15), but this can be overcome by shooting High County 6.2 grains/inch arrows. They are expensive but it is the bow arrow combination that truly elevates the archery experience. Very few stores carry this arrow as few bows can use it.

First check out your own arrows for straightness, grains/inch, and spine. Note our arrows are +/-.001 straightness, either 5.5 or 6.2 grains/inch and .324 or .300 spine respectively. Most people feel they have light arrows but really do not. Easton and some others manufacturers grade their arrows with the ASTM F2031-05 standard which measures defection between 28" centers. Example a 340 Easton arrow deflects .34" (they multiply by 1000) Our arrows measure .324" deflection for the 5.5 gr/in and .300" deflection for the 6.2 gr/in. With the Liberty bow's requirement for very stiff arrows you get four advantages from the stiffness.

1) Stiff arrows contact the arrow rest less increasing the speed (arrow rest drag).
2) Stiff arrows contact the arrow rest less improving the accuracy (less arrow rest interference).
3) Less fishtailing which pushes the vanes sideways through the air burning up forward speed.
4) Less bending in flight of the arrow shaft which is robbing energy and therefore speed.

I recommend 2.0"Blazer Vanes (we stock) at slight 1 degee helix or less. We are now carrying the Arizona E-Z Pro Fletcher, Blazer vanes, glue, points, and T3 broadheads so you can do your own arrows and be totally self sufficient.

You can easily make our own cutting jig with a Dremmel saw ($19.95 at Walmart). Rough cut the arrows by hand to within 1" of correct length and then by mounting the Dremmel on a board and backstopping the nock end and twirling the arrow you get accurate cuts.

For BroadHeads we recommend and carry the T3 by G5 Outdoors 100 grains. They fly the same as 100 gr. field points.

So take advantage of these facts and avoid state sales tax and shipping costs (if shipped with bow).

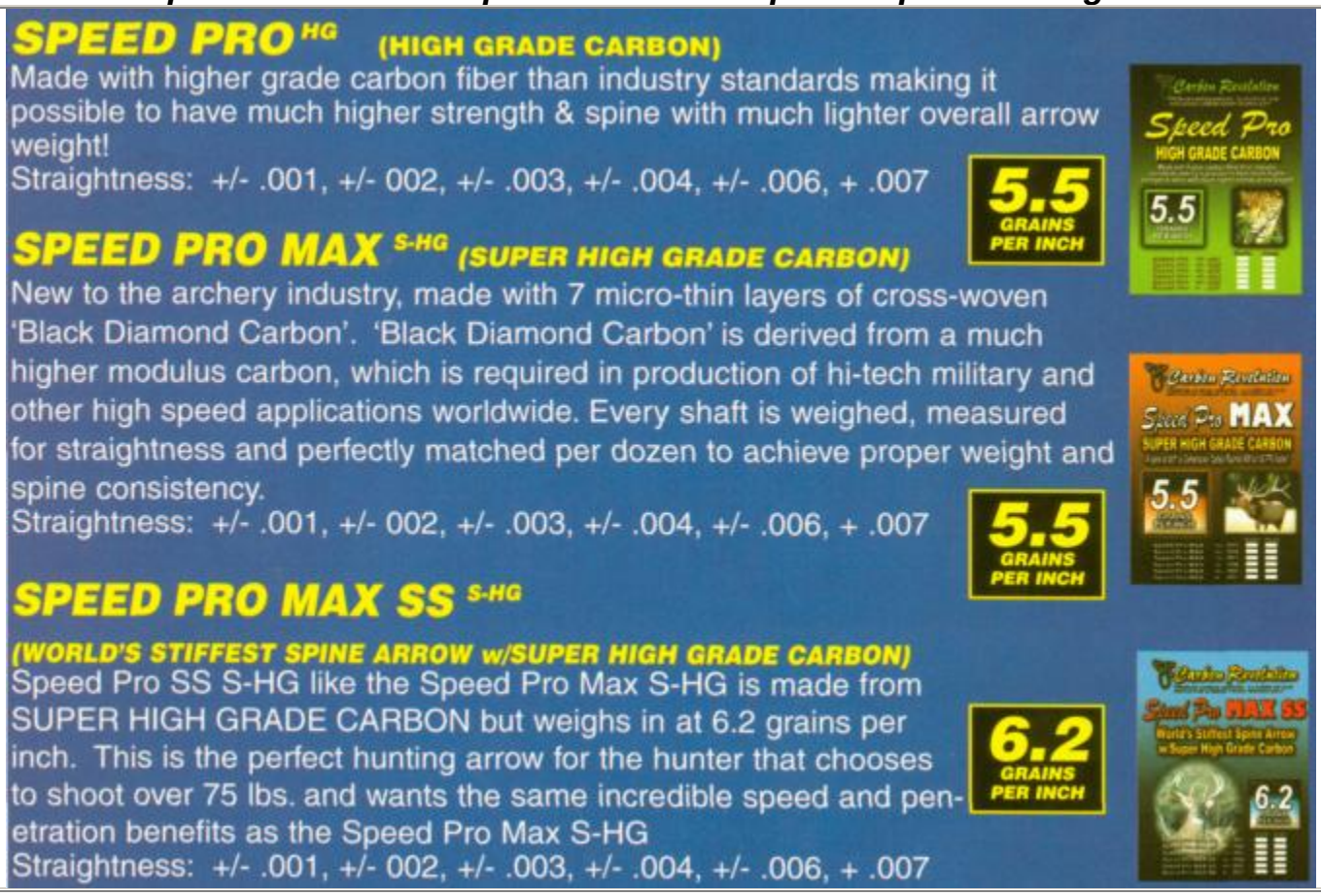
http://highcountryarchers.com/hc_arrows.htm

HE FASTEST ARROW YOU WILL EVER SHOOT!

Stiffness + Less Weight + MORE SPEED & PENETRATION

Penetrates more than a heavy arrow shooting flatter and improves hunting success!

up to 40% Faster - Up to 32% Stiffer Spine - Up to 48% Lighter



The spne of the 5.5 gr/in arrow is .324

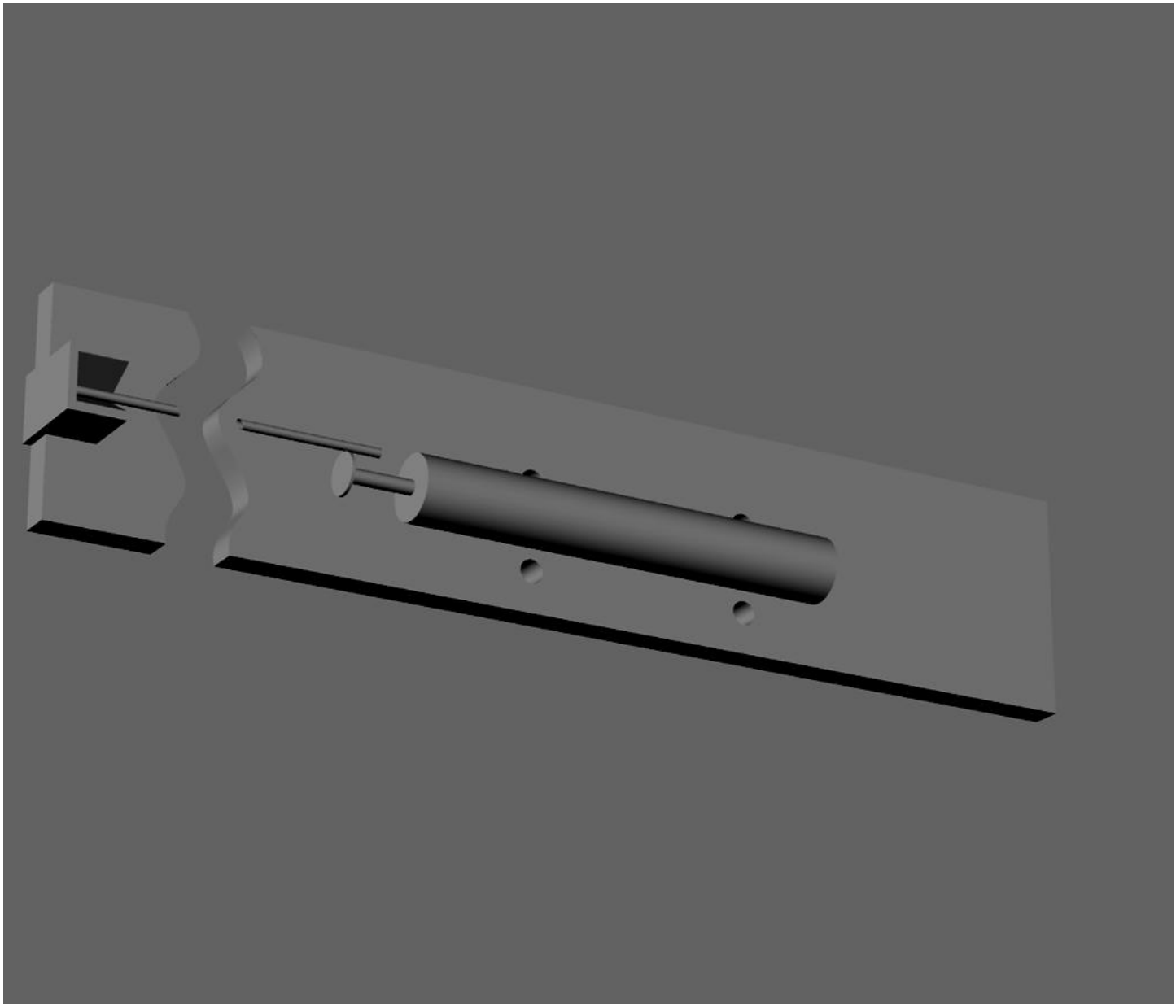
The spine of the 6.2 gr/in arrow is .300

According to the modern standards (ASTM F2031-05) an arrow's official ***spine deflection*** is measured by hanging a 1.94 lb. weight in the center of a 28" suspended section of the arrow shaft (not to be confused with the old AMO standard of 2 lb. and 26"). The actual distance the 1.94 lb. weight causes the shaft to sag down is the arrow's actual ***spine deflection***. For example, if a 1.94 lb. weight causes the center of a 28" arrow to sag down 1/2 inch (.500"). Then the arrow's spine deflection would be .500". Stiffer arrows will, of course, sag less. More limber arrows will sag more. So the stiffer the arrow is, the LOWER its spine deflection measurement will be. The more limber an arrow is, the HIGHER its spine deflection measurement will be.

Below is a drawing of a easily made cut-off saw for your arrows

Parts:

1. 36”x 3.5” x0.5” board
2. 1”x 1.0”x1.0” block
3. 1.5”x1.0”x 1.0’ back plate
4. Dremell Saw with cut-off blades
5. Holes to attach dremell with ty straps to board.



To determine the change in bow draw pounds to have a heavy arrow shoot with the same Kinetic Energy as a light arrow.

1) First shoot the light arrow and measure it's speed
2) Weigh the light arrow . Unit of measure grains
3) Weigh the heavy arrow .
4) Use this formula to calculate

$$v_{heavy} = \sqrt{\frac{m_{light}}{m_{heavy}} \times v_{light}^2}$$

5) Turn down the pounds on your bow until you match in the chronograph shooting the heavy arrow. Result is your bow lbs!

Usually you loose 5%, or a 63 lb bow shoots a light arrow with the same kinetic energy as a 60 lb bow with a heavy arrow. It is not much and a light arrow has many advantages. Kinetic Energy equals penetration. The same Kinetic Energy *IS* the same penetration.

Arrow ------ Weight ---- Grains/lb. ---- FPS ---- ft-lb ---- Efficiency %
CXL-2 250 ----- 347 ----- 5.88 ------ 297 ---- 67.9 ---- 81.9%
SpdPro 6.2 GPI - 300 ----- 5.08 ------ 315 ---- 66.0 ---- 79.7%
SpdPro 5.5 GPI - 261 ----- 4.42 ------ 334 ---- 64.6 ---- 77.9%
So -- I picked up a lot of speed with the lighter arrows, and didn't lose much efficiency. That means there isn't a whole lot more energy being absorbed by the bow with the light arrows, which means it probably wouldn't do any significant damage. Also I didn't notice much difference in noise.