
africa's
bowhunter
Record eland taken with a bow
Alloy arrows – a viable first choice?
Bowhunt red lechwe
Lord of the rocks
After the shot
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SOUTH AFRICA
R32.95 [incl VAT]
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Bow test:
Bowtech Carbon Knight
Bowhunting sable antelope

cent reduction in weight. The questions then follow: Does a reduction of six per cent in shaft weight translate into a six per cent increase in velocity or a six per cent reduction in trajectory and how does that reduction in arrow mass affect kinetic energy and momentum or penetration potential?

For the sake of our discussion we will base velocities on an IBO bow speed of 318 fps (feet per second), a 70-pound draw weight, a 29-inch draw length, 200 grains for point, fletching, insert and nock with no weight on the string.

My calculator shows arrow velocities of:
XX-78 2413: 500 grains = 258 fps
Axis: 484 grains = 263 fps
Injexion: 458 = 272 fps

The speed gained by the theoretical Axis arrow translates into a 1,93 per cent increase, but using the Injexion shaft boosts speed by 5,4 per cent. So the answer is "yes, kinda". A radical reduction in weight does produce an appreciable increase in arrow speed; however, does that apparent increase in speed actually produce a flatter shooting arrow?
Once again, whipping out the calculator we find when using the previous data and "zeroing" the bow at 20 yards and then shooting at 40 yards with the 20-yard pin (I know it can get a little confusing. But I don't hear any weasels... yet):
XX-78: 500-grain arrow, 258 fps = 22,1 inches of drop from 20 to 40 yards
Axis: 284-grain arrow, 263 fps = 21,3 inches of drop from 20 to 40 yards
Injexion: 258-grain arrow, 272 fps = 19,8 inches of drop from 20 to 40 yards

Using the same equations as before, the Carbon Injexion shows a *10,4 per cent* reduction in drop from 20 to 40 yards. On paper this sounds like quite a bit, but reviewing the differences in inches we find a savings of only 2,3 inches. The "standard" accuracy minimum that I have adopted for bowhunting is Chuck Adams' recommendation equating to one inch of group diameter per ten yards of distance (ie one inch group at ten yards, two inches at 20, three inches at 30 and a four-inch group at 40). If that specification is good enough for him, it should be good enough for me too! However, I must admit that some days I think it would be easier just to go back to the 375.

While a reduction of 2,3 inches of drop may sound like a considerable amount, it has been my experience that at forty yards many if not most archers have difficulty in maintaining the prerequisite four-inch group size. Since the vast majority of game animals are killed within a 20-yard radius, I think the 2,3 in reduction in trajectory becomes a moot point.

I prefer a heavier weight arrow for all applications. You will note that in the beginning of the carbon shaft craze, all of the hoopla was about light and fast. Now the trend is toward heavier and heavier carbon shafts. Why do all the top archers use heavy for diameter shafts then? I'll tell you why: better wind bucking, more retained energy down range, greater durability and the supposed flattening of trajectory is statistically minimal. ABH

Product Showcase

ArmourDillo Cam Protector by Hedog Archery

By Frank Berbuir

The ArmourDillo by Hedog Archery is a small but tough device you can mount easily as a permanent part of your bow on the lower limb for protecting the most easily damaged lower cam and string. Its rugged design is made by an injection molded with high quantity of fiberglass filled shock absorbing material. Virtually it gives your lower cam a full cover protection around it and you do not have to be concerned how you place your bow on the ground, lean against a tree or whether to rest it on your boot or not.

With two knocked in arrows and the ArmourDillo, your bow can stand upright and free. You can also combine the ArmourDillo with an OMP kickstand or Pole Mountain Outdoors Bowlegs for a free stand and nothing of your bow touches the ground.

Furthermore if you are hunting, practising or on a tournament in rough terrain, mountainous or scree slopes you could use your cam-protected bow for walking support such as a cane or walking frame for climbing up or down. It will add about 2,1 ounces or 59,43 grams to the bottom limb. Personally I do not notice this bit of weight and I had no loss of arrow speed. All mounting hardware is included and the installation is easy. Moreover, there is an installation video available on their website. You can get the cam protector in two variants. One version for solid limbs and the other for split limbs. It fits more or less on every bow except Bowtech Destroyer, G5 Prime Shift 29-inch draw length and longer, G5 Prime Centroid 30-inch draw length and longer and Hoyt G3 Element with mounted airshock. This "gadget" is definitely not low priced at about $70, but for me it was a good buy because a damaged cam or string is not just more expensive, it is also really annoying if this happens in the field or even worse on a hunt. I personally do not want to miss the ArmourDillo anymore on my bows. For further information check out their website under www.HEDOGarchery.com. ABH