

The Right Choice
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by Nick Bower

There was a post on the OSTA website forum that got me to thinking. The subject of the post was coyote traps. I'm going to express my thoughts and some experiences on this in hope that some things I've learned may help you. I will only address the mass produced equipment and not the specialty traps available. I feel compelled to say that in my opinion, it's difficult at best for a mass-produced trap to even remotely compare to the Jake, Sterling, or MB traps.

Moving on. I don't consider myself a coyote trapper by any stretch of the imagination, but I have made some costly errors along the way. I guess you could say that I have made enough mistakes to know what not to do in most cases. What makes a good trap? Well, to some it may be the price of the equipment. Others may prefer a square jaw to a round jaw. A square or rectangular pan over a round pan. Regular jaws over off sets. The list goes on and on here. I often think that a very important part of all this is that it's what you have confidence in or feel comfortable using.

A friend of mine, Jon Little, did some good homework and started ordering one of several different brands and sizes of traps. As he gathered these he would bring them to my shop and we would digest each one. I must say I was somewhat surprised at some of the things we found. Some good, others not so good. This was a real learning experience for me in the fact that I had never had hands on experience with some of these traps. Jokingly we divided these into two groups. Boat anchors and users.

My guess would be that there are more 1-1/2-size coil spring traps in use today than all others combined. Personally, I have used this trap for just about every furbearer at one time or another. I do not consider this size trap a coyote trap by choice, but I have caught and held coyotes in them. Would I set these aimed at the coyote? No. If I were to target coyotes I would not consider anything under the 1-3/4 size trap. Keep in mind, here in Ohio we are restricted to a trap with a jaw spread no greater than 5-5/8 inches.

The coyote is notorious for their uncanny ability to destroy equipment. Jaws removed from the frames, bent frames, bent or totally missing dogs, pulling spring pins, being able to dislodge the spring from the lever. This list goes on and on. Not to mention their ability to lunge and pump the anchors, or to slip the trap once caught. They certainly can and do test the equipment.

There has always been and I'm sure will continue to be debates and conjecture over what a person can do to help eliminate some of these things from happening. I've said many times before, "I've never met a trap I couldn't fix." To this I say, do what you're comfortable with; do the best you can to make the trap worthy of the target animal. To me there is nothing worse than making a catch and due to my error the animal makes his escape. That is my fault and is unacceptable in my mind.

Now here are some things that I know work for me. Experience has taught me that I'm only going to get back what I'm willing to put in. Lets start at the very basic.

Trap choice. Personally I seem to lean towards a trap that I can use for varied species. What I mean is I realize that a trap built to successfully capture and hold a coyote would not be the trap of choice for muskrats. You have to consider the other animals you're going to encounter, such as red and gray fox and the raccoon as well as skunks, opossums, etc.

Base plating the frame. This serves two purposes for me. Number one being that it certainly strengthens the frame to avoid it being flexed or bent, which leads to jaws popping out of the frame. It also allows me to employ a fastener to attach my chain to. I'm a firm believer in a center mounted anchor point. A base plate

can be the more standard flat stock and D-ring, or as little as a piece of say 3/16" or 1/4" rod with a dimple and a couple links of chain added prior to welding. I might add that there is no reason a flat base plate can't be drilled and bolted on. The rod won't work for this, naturally. If you choose to you can sort of form the end of the base plate material up and around the end on the frame a short distance. Be careful here as to not interfere with jaw ends coming through the holes in the frame. Use a little caution on welding base plates close to the springs. A little dab will do ya' at this spot. Just be careful and don't heat the springs. You can unhook and relieve the tension on the springs or remove them if you desire.

Laminating the jaws. Again, in my opinion it serves a couple purposes. It adds strength to the jaw, lessening the possibility of flexing or bending and popping out of the frame. It also adds thickness to the face of the jaw and more surface to contact the foot. I want to add here that when you increase the width of the face of the jaw, you now are also decreasing the pounds per square inch of force at the point of contact where the springs apply. There are several decisions to be made. Round stock vs. flat stock, width, thickness, etc. Again, flat stock could be bolted in most cases if a welder isn't available. One thing I've found is that it seems difficult for me to weld the round stock on the jaws. It never fails as I start to clamp the material to the jaw it wants to roll to some degree. The flat stock doesn't do this. I like to do the laminating with the jaws and springs installed. I slip a strip of non-ferrous material between the jaws. This allows me to bump the lamination strip in the proper place. Inside or outside laminations? I guess my thoughts are that I prefer to laminate the outside of the jaw. My reason is I don't want to cut down on the inside jaw spread. When outside laminating, be very careful. On some brands of traps the distance between the jaw and cross frame where the dog attaches is minimal. This can cause you a lot of grief. Trust me. I've seen at times when the laminate material would actually hit the eye of the dog. Yes there are ways to fix this, but what I'm trying to tell you is that for every action there is going to be some kind of reaction. Think ahead. I have also seen the inside lamination cause a problem by hitting the edge of the coil spring and not letting the jaw depress so as to engage the dog. No matter what material or method you use, be sure to smooth off any and all rough edges. Let's talk off set jaws for a minute here. The advantage to an off set jaw is that it allows the levers to rise just a bit higher when the trap is fired and contacts the animal's foot. This naturally allows more leverage, or locking force, of the springs to apply.

Springs. Now this could be an entire article in itself! I have seen and done most things here. Again, I've learned what not to do. Spring rates vary over a wide range from one manufacturer to another. In most cases I see no reason to change out springs on new equipment. If you chose to do this fine. Be warned though. Bumping up spring rates can cause problems at times. What I mean is by going from say a #1-1/2 to a #2 spring. Or a #2 to a #3. On some traps, a weak point is the levers. By increasing spring rate it will actually bend or flex one side of the lever. Take a look at some of your coil spring traps and you will see what I mean. The side that holds the spring arm will be bent a little further than the other. Now we add a stronger spring, we cause even more trouble here. It seems the school of thought is to add an extra set of springs on the opposite side of the factory set up. I do this on some traps. I would not do this without some of the other modifications I've mentioned. As we call it, four-coiling a trap does a couple things. It naturally increases the "power" of the trap. More spring rate adds more PSI to the jaw face. It will help bring the jaws up through the covering material. This helps in muddy or frosty conditions. One of the pitfalls to this that I've found is that it can at times cause the loose jaw to be slightly higher when the trap is in the set position. Also, most spring pins on traps are not long enough to accommodate the add-on springs. So we need to fabricate or purchase new pins. At this point it's necessary to look at possibly devising some type of anchor here to hold the ends of the springs in place where they contact the end of the cross frame. In most cases, adding extra springs or more powerful springs adds to the pan tension.

Pans. Wow, what to do here? In my opinion there is no more important part of a trap than this. It's like the trigger on a gun. If this part does not work properly all else really doesn't matter. For certain they need to be wobble free and no excess movement or travel. Aftermarket pan and dog systems are available for most traps. My experience with these are limited so I don't feel comfortable trying to explain their operation here. I'll stick to what I know. I have no problem with the stock or factory pans on most traps today. Naturally I'm

speaking of the pan post type here, a nut and bolt hinge point, not the older hump cross frame style traps. Several things here need addressing. For the most part the hole that the bolt passes through is not correct. Either the post or the pan shank holes don't match in size. This is a simple matter of drilling the correct size hole in both to match up. Then a new bolt of the proper size can be used here. If you look closely you will see on most traps that the pan post has been drawn together with the bolts inserted at the factory having the top closer than the bottom where it goes through the frame. This does not make for a smooth action. You can slip a screwdriver in between the post and even this up to the best of your ability. I like then to add a washer, either brass or nylon, to take up the excess slack here. Different brands of traps call for different thicknesses of these washers. I prefer the night latch system for the pans on all my traps. Mass produced trap parts are stamped or punched out. The pan shank will need to have a file run across both sides to true them up; one side will be a bit concave while the other is convex. This is just a natural thing on stamped parts. The actual filing on the notch in the pan is rather simple. I use two different thicknesses of files to do this. The first is of a thickness to closely match the factory notch, the other is just a tad bit thicker and I use this to create the notch that the dog will engage when the trap is set. I put the pan shank in a vise and make a few passes in the original factory notch to deepen and clean it up. Then I use the thicker file to create the other top notch. I use a thicker file here and let it run against the bottom of the notch against the pan shank. The bottom of the notch really doesn't matter to me what it looks like or if there is a small gouge in it. It helps guide you in making the proper top notch. Caution here - it's easy to remove more material, but very difficult to add it back once it's gone. Remember this though, a new pan is not that expensive if you make a big boo-boo here. This is a good time to make sure the pan is firmly attached to the shank. I usually put a tack weld on here.

Dogs. Not much has changed here in decades. The dog for the most part is still today just a strap of metal. In most cases I'm sorry to say they are vulnerable to damage by the coyote. If you want to stick with the stock dog, go right ahead, just be ready to straighten or at times look for it after a catch has been made. Bob Custer makes what he calls the "Top Dog" made from a much heavier material, almost coyote proof. Or, you can weld some extra material on top to beef up the stock dog. On the workbench you need to close the eye a bit where it goes around the cut out in the end of the cross frame. Don't overdue it, you do not want to cause it to bind to a significant point. Naturally when you close the eye it tends to lengthen the dog a bit as well. Do the closing of the eye first, then you can file the end that engages the notch so as to create a crisp slightly angled edge. Then lightly file off the top where it engages the pan notch as you will have raised a burr here. Go easy, look, feel, test. Now with the pan assembled back to the cross frame and the dog modifications completed, adjustment of the pan height can start. My honest opinion of the night latch is this. When you employ this set up, you are setting the trap in the downward movement. Let me explain. Set the trap and engage the dog in the factory notch. Raise the loose jaw a bit, reach in under it with a fore finger under the pan and the thumb on top of it gently start pulling the pan down and watch the dog as it engages into the top most notch. You can also apply pressure with the other thumb on the dog, pushing it inward at the same time. All slack or movement now in the pan/dog has been pulled out. When the pan drops from applied pressure I want the trap to fire like the trigger on a well-made firearm. No excess or lost movement, period. As they say, practice makes perfect here. Set them up to your liking, and do your best here to make every one identical.

I'm not going into the anchoring system here as it can and should be an entire article in itself. I hope some things here get you to thinking and may even be of some help to you. Do what you can and upgrade your equipment as it will pay dividends on the trap line. #### Nick Bower, PO Box 181, New Athens, Ohio 43981.