

Conservation For Eels by Design

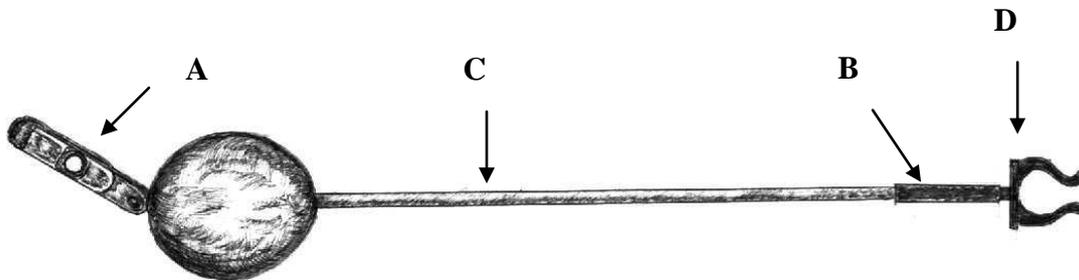
By the Damian “Burglar” Wood

Indicators:

There are many ideal drop-back indicators on the market and probably some of you are using the ones that I’m going to suggest I have found to be inadequate for the job when using “ Bolt-Rigs”, or registering earlier bite identification combined with the type of line, rig and lack of resistance used.

All I am doing is pointing out the reasons for me not personally using these types of indicators due to the faults that I have found using them over the years as my methods have developed. Things that you don’t even realise is happening because unfortunately we have to cannibalise every existing equipment available to carp and pike anglers to suit our own needs, due to our species being so “popular” in the angling scene, or just live with it because that’s all there is. By identifying possible reason for deep hooking this may make you think how you fish and how to compensate you’re styles to reduce deep hooking in your own fishing.

Indicator type 1 “The Pike Drop-off”:



There are various types of this particular indicator’s on the market they are okay for pike and zed’s, but due to the problems we have with eels they fall short for various Reasons. This being too much unnecessary movement or pliability that can go undetected, for example if an eel is mouthing or playing with a bait (especially ledgered hard on the deck, even though they are predators doesn’t mean if the bait is there they will have it!).

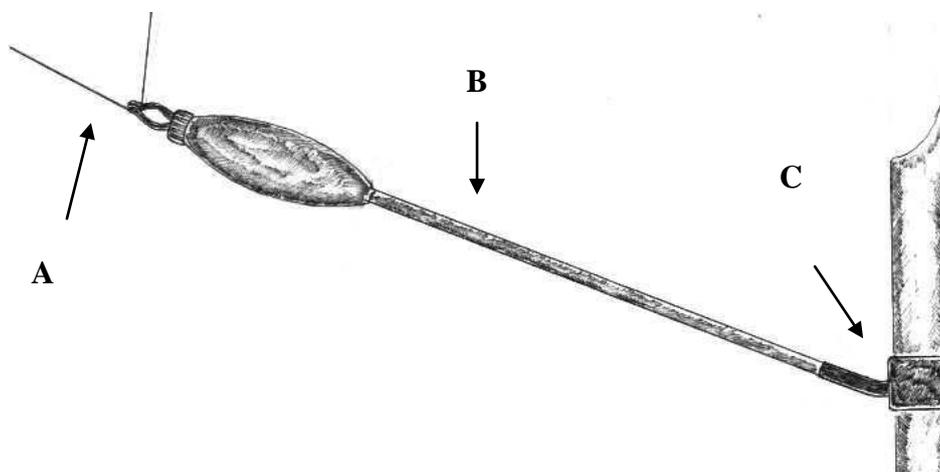
A: There are various types of heads available like the above and below pictures the advantages is that you can adjust the tightness of the line clip. The disadvantage is that they have too much movement as they hang on the line and when a take occurs the slide along the line before being unclipped could be as much as an inch added with this “B” and that can be increased again by another inch or two, may not sound a lot but wait till we get to the properties and behaviour of using mono with these types of indicators.

B: There are also various ways that the whole indicator attaches to the bank stick clip, some of the newer versions like fox swinger adaptors which is a vast improvement combined in some cases with adjustable sliding weights on the arm “Brilliant!”. But the majority are attached via heavy silicone tubing again this creates too much flexibility and movement decreasing bite detection as they can sway from side to side or as in the clip it self can slide and twist. I have witness this before a take on many occasions, but luckily I was using off bottom rigs, what if I was using bottom baits, what would be the chance of deep-hooking being increased fishing in an “eel fishing” conventional way?

C: Usually the stem is made of hard plastic tubing, this has the tendency to bend very easily due to this factor this decreases bit detection combined with **A**, **B** and **D**. The other factor is that they are heavily effected by natural forces like wind giving false bleeps and coming unclipped (Which could be for other reasons but put it down to natural causes).

This can be illustrated in the diagram below just picture the elements discussed above and picture in your head what happens when a take occurs and the line is pulled from the clip.

Indicator 1 in use:

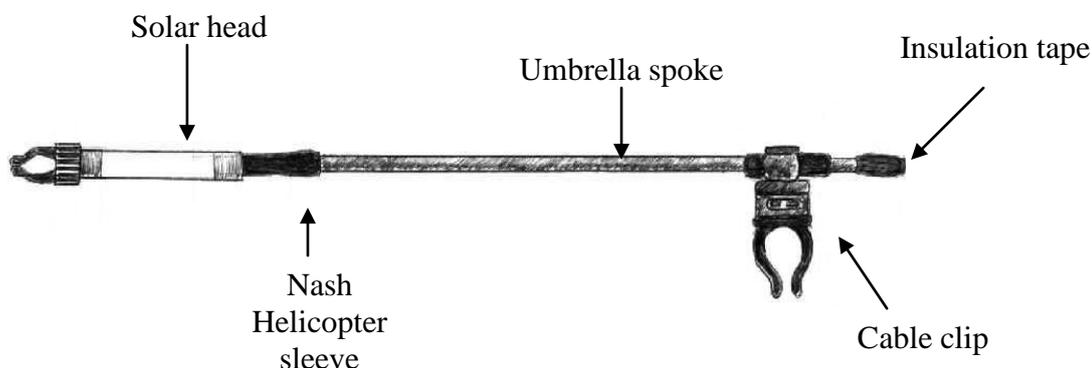


- **A:** As the line is pulled the clip slides up the line up to 2-4 inches before disengaging.
- **C:** Due to the easy movement and pliability this levers up causing the clip to slide up the line. Also with the added factor of sideward movement and twist.
- **B:** Would increase this factor even more, even if the most pressure available or accepted via mono still would give poor early bite detection.

Indicator 2 “What I previously used”:

Due to these factors, I decided to make my own “drop backs” with what I had available. What started it off was a former member Stuart Dean; he worked at Fords and gave me a large bag of cable clips that had a rotating part to it with a small clip for a stem and a large clip for a bank stick.

Home Made Indicator:

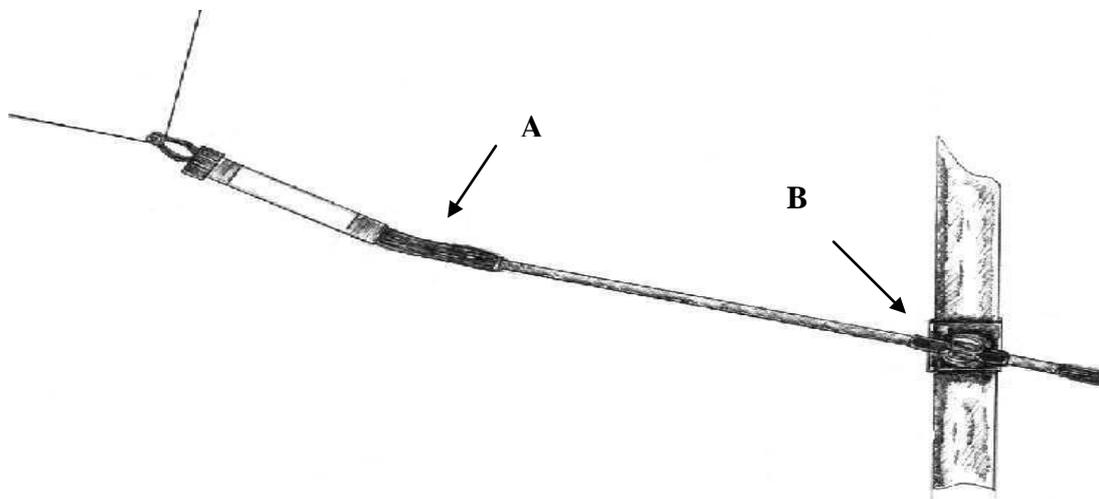


As you can see from the diagram instead of a flexible arm the arm is made of metal this can't bend, also the flexible silicone was replaced with a fancy rotating clip and a head that takes isotopes, including an adjustable clip “Brilliant!”. This was a mass improvement to what was available at the time I was using these types of indicators in the second season of being a member of the N.A.C (1996) after I stopped using needles and climbers and even the old washing up bottle tops. Lack of resistance and poor bite detection is the main cause of deep-hooking this is just my own personal conclusion.

Anyway going back most of the elements mentioned were eliminated and I used these types of indicators with no problems until about two years ago when I started to use or being pointed towards using semi-fixed rigs at that moment in time. The weakness of the indicator for this type of fishing was the head, it was too flexible and it suffered the same problems as the older indicators but not on a greater scale because I was using braid and the connection to the bank stick was far superior at that moment in time.

Due to this it did enhance the movement and with there being an isotope in the head you could see the indicator sometimes lift slightly or twitch from side to side very quickly. On noticing this I would investigate the rod, the tip would give a quick violent bounce, then it would unclip and a run would appear. The question is how long had it been going on and secondly, if I was using conventional indicators and still using mono, would I have noticed it in the first place? The next step that I did was to add weights to the head, this did improve the situation, but I worked out that in order to make the rigs more effective then movement of the indicator had to be minimised first. But how to do that?

Indicator 2 "In use"



- **A:** Still slight give, but an improvement.
- **B:** This movement is increased by the rota arm clip revolving, decreasing early detection, but still had the ability to move side to side on the bank stick.

Luckily enough I have a tackle shop as a bedroom with a dark cupboard full of past bought equipment, I started to look through stuff that hadn't been taken down to the winter social as a raffle gift or more precisely, been swapped or blagged out of by B.T on the way down to the social. If you only knew what I have tried to take down to the raffle including stainless steal buzzer bars only to be swapped for burnt sausages wrapped in some tinfoil! Which a welsh man won in the raffle, on that occasion there was even min microns on the table, laughed I was in tears! You had to be there!

Eni hoo! (Anyway back to the story to non Wiganers). I managed to find some old "Solar" stainless swingers from my carping days. Also at the same time I had been talking to Pete about it as he had access to a lathe as the original idea was to make some from scratch and use the old solar indicators for the threads so that I could still use all the accessories available under the Solar banner. But this was prone too difficult to get hold of the dye for the thread. Then good fortune lay upon me and Pete had bought a job lot of carp stuff, rods est. Anyway in the job lot was a full set of solar various swinger indicators and all the toys with it "Which was nice"!

Indicator 3 “Solar System”:

If you can remember the first stainless indicators from “Solar” all them moons ago they slip into three sections, but also there was added weights (**B**) which adjusted anywhere along the stem, everything I was asking for was in front of my eyes but I didn’t see it until Pete pointed it out to me.

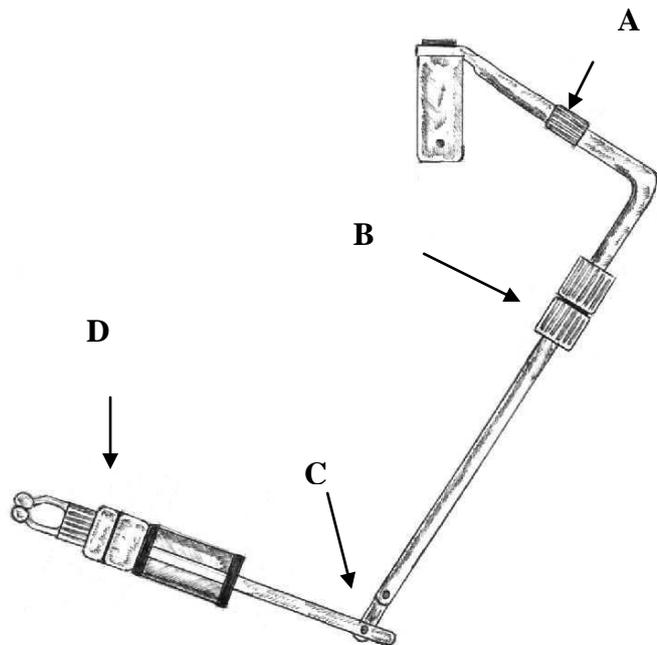
As you can see from the diagram:

A: Due to fitting at the back of the buzzer bar, using the specially angled adapter the indicator screws in position and is then locked into position eliminating movement.

B: Due to the indicator having a swivel section underneath, this is locked into place using the weights already provided. Again restricting movement of any kind.

C: This is the only place that the indicator moves, but once tightened onto the rig, it is locked into position, causing on only two possible actions on a take. One is to unclip, the second is to drop back.

D: Extra weight can be added to increase sensitivity of the set up, using 25 grams at the moment. Also a better standard of clip-head (Stainless Steel Ball-clip) is used which tighten better than plastic alternatives that tend to twist.



The Solar Indicators in use:

This is a diagram showing the set up in use on the pod. I have been fishing with these type of indicators for a couple of seasons know and very happy with their adaptability.

The problem well the thing about these indicators is that they are not made anymore, but maybe still available, but some of the cheaper versions from other companies could be cannibalised with a bit of ingenuity.

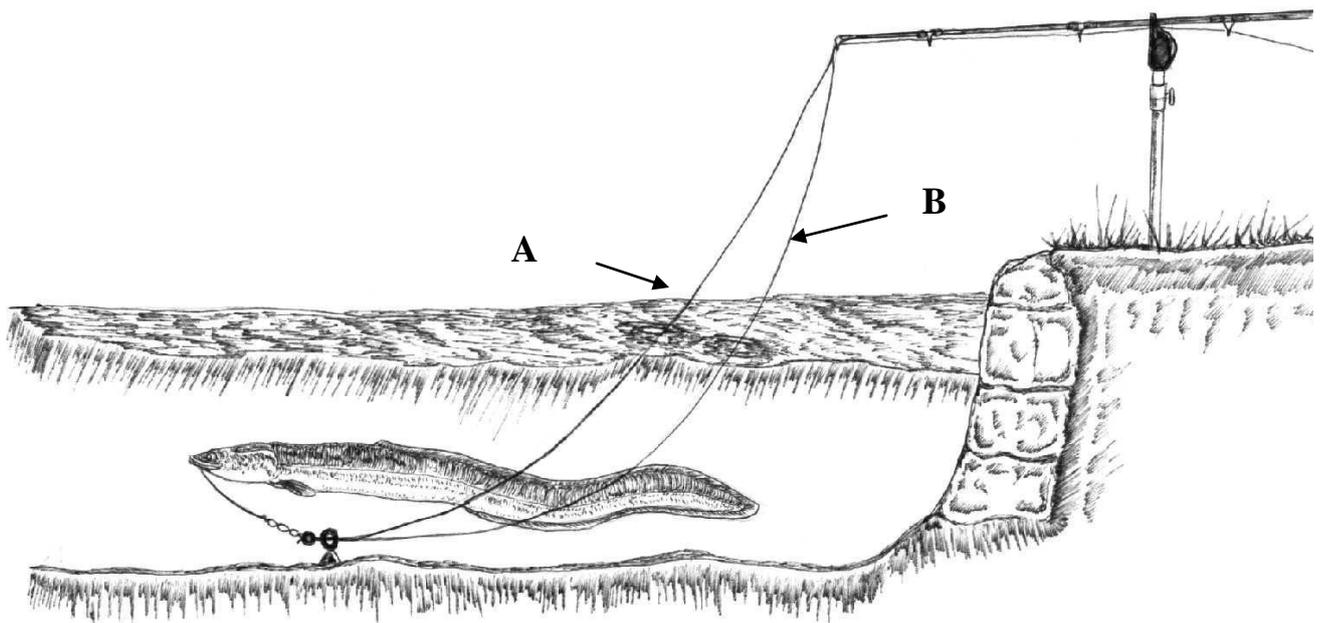


Another alternative is the “Solar” Springer arms that work under tension so if you come across any grab them because to me they make excellent drop back indicators, due to working under tension and used in reverse they will eliminate some of the sagging of the line and put resistance needed on the set up to make an effect early bite detector. One thing I will say about the other type of drop indicators that are available mainly the micro switch type with built in alarms from F** for example, use them for piking or zed’s as they are not at all effective for the style of fishing I do and not worth a mention they fail pitifully and I have never been a great fan of them at all even for pike or zed’s, but each to their own.

Braid and Mono Lines:

Bearing the indicators in mind we will see what effects using these types of indicators and the usage of mono and why the combination causes most of the problems that we concur with eels, the main reasons behind deep hooking and all the other problems that we have had from the past due to the technology of the equipment of the day and probably the reasons that some of you who have used the SFR Rig have had difficulties and not the same successful results that I have “Touch wood” using these new methods and concepts.

Don't forget it hasn't been the same result in the beginning, many takes were missed and a lot of cussing was involved, but it wasn't the rig and it wasn't the line the only thing I could put it down to was the flexibility of the indicators once this was eradicated the problem stopped.



As you can see from the diagram above line **A** is braid and line **B** is mono type line this is down to the properties and behaviour of mono-lines even though the advancement in this type of line today has made a dramatic change say in the last five years, in abrasive resistance and even water non porous properties (Fluorocarbon lines) that previous lines suffer from and lower stretch factors some on the market with stretch of 10%, but you have to bare in mind the reason for this is that they are already pre-stretched to their limit, which means that they will fail on abrasion and strength compared to braided lines, even so they all suffer from the same fate and that is a higher density mass than braid, but what does this mean?

Basically they sag more in water causing an immense curve that has to be taken out until the line clip is pulled before a run is registered. Know then say for example you cast out about 20 ft, and then you set the rod up and tighten down on the lead, switch the alarm on and clip up using the basic drop off indicator.

How much line do you think you can take before you get a single bleep on the alarm? 4 inches or at the maximum of say 6 inches? Try again as we should be talking in feet, roughly up to one and a half foot of line and this is at 20 feet before the alarm makes a single bleep what if the distance was increased to 50 yards. How much line could be taken then, or even picking up the whole rig and lead and moving up to 5ft in any sideways direction with a bleep on the alarms. Any old carpers out there have experienced this while carp fishing? I have had this happen on numerous occasions in the past even with fixed 3oz leads.

Experiment:

This is something that you can try yourself at home or on the banking to see what I mean. Set your rods up and walk out about 20 feet with your rig in hand, place the lead in the ground as an anchor (this would represent a lead cast out and hitting silt). Then set the rod up in fishing mode with the clip on and open bail arm. Go back to the rig and see how much line can be pulled till the alarm bleeps, then carry on until the line comes out the clip. You will also notice what a taking eel would feel when taking a bait, and how much line is given before any registration is noticed at the other end. I think you will find the result a real eye opener. Better if there are two of you so the other can stay at the rod end and watch the indicators movements at the same time.

If you have a rod on braid, then repeat the same exercise and you will be able to compare the results by a clear margin and all will make sense.

So I' am going to leave you some bullet points to consider and questions to ask yourself and looking at the diagram above to work out which would register first and reduce deep-hooking using conventional running rigs never mind "Bolt Rigs".

- **Stretch Factor:**
- **Density In Water:**
- **Conclusion combined with conventional drop-off indicators:**
- **How would the use of mono effect using "Bolt Rigs" either on the deck or suspended?:**
- **Do these factors increase the chances of deep hooking and encourage problems we have had in the past?**

Braided lines:

But even so there are also various types of braids on the market some better than others some designed to perform certain tasks, it is all confusing to say the least. And yes they are not all perfect and the saviour of mankind? I have looked and tested various products of braids on the market for various properties. These being abrasive resistant, floatability (water resistance), casting ability, ease of recoil off the spool, knot strength and secondary knot strength and finally dry and wet breaking strain.

I don't want to be liable for pointing out the floors with certain big name braids so I am going to use abbreviations and you have to guess what they are.

There are different ways that braid is made one is a fusion braid which entails the fusing of polymer and a carbon based substance i.e. Kevlar or dyneema this means they are melted or fused together in very thin strands this is then twisted into a single line while going under a controlled heat source. The other is a complexed woven type braid and can come in two forms. One being a hollow woven braid like a tube, the other a flat woven braid like a hair ponytail plat, both made up of hundreds of individual strands. There are more braids available on the market and if it isn't mentioned here, then you will have to put it through the test yourself to see if it makes the grade.

They where tested in various ways, for abrasion they were rubbed under pressure over a granite sharpening stone until it snapped which was counted, to test the breaking and knot strength, they were equally measure out 2 ft of line and then tied using the same knot to a set of scales and pulled until they broke reading the results, crude but a certain conclusion can be made for the choice of braid to use, and finally back ground research of the product even though sometimes this can be dubious to say the least.

Braids tested:

F**eLine:

Type: Gel-spun fusion.
Abrasive resistant: Medium
Floatability (water resistance): High
Sinking ability: high
Casting ability, recoil off the spool: Low
Primary knot strength: High
Secondary knot strength: High
Dry breaking strain: High
Wet breaking strain: High
Weakness: Tends to fray and single strand can break eventually lowering the breaking strain after period of time (3-4 seasons usage).
Marks out of 5: 4

Hurc*line:

Type: Woven hollow.
Abrasive resistant: Medium
Floatability (water resistance): Low
Sinking ability: High
Casting ability, recoil off the spool: High
Primary knot strength: Medium
Secondary knot strength: Medium
Dry breaking strain: Medium
Wet breaking strain: Medium
Weakness: Knot strength is lower than breaking strain by 2lb, which is usually common. Due to lack of stretch. Suffers from fraying also (3-4 seasons durability).
Marks out of 5: 3

Sp**er w**e:

Type: Gel-spun fusion.
Abrasive resistant: Medium
Floatability (water resistance): low
Sinking ability: High
Casting ability, recoil off the spool: low
Primary knot strength: Medium
Secondary knot strength: Very low
Dry breaking strain: Medium
Wet breaking strain: Medium
Weakness: On secondary break can lose up to 50% of its strength due to damaged single strands further up the line. This was the worse line tested ever.
Marks out of 5: 1

F*x Drifter

Type: Woven flat.

Abrasive resistant: Medium
Floatability (water resistance): High
Sinking ability: Low
Casting ability, recoil off the spool: High
Primary knot strength: Medium
Secondary knot strength: Medium
Dry breaking strain: Medium
Wet breaking strain: Medium
Weakness: fraying after a period of time
Marks out of 5: 3

F*x Sinking:

Type: Woven flat.
Abrasive resistant: Medium
Floatability (water resistance): Low
Sinking ability: High
Casting ability, recoil off the spool: High
Primary knot strength: Medium
Secondary knot strength: Medium
Dry breaking strain: Medium
Wet breaking strain: High
Weakness: Fraying after a period of time.
Marks out of 5: 3

N*sh B***et:

Type: Woven hollow.
Abrasive resistant: High
Floatability (water resistance): Medium
Sinking ability: Medium
Casting ability, recoil off the spool: High
Primary knot strength: High
Secondary knot strength: High
Dry breaking strain: High
Wet breaking strain: High
Weakness: Fraying after a period of time.
Marks out of 5: 4

M*gi-braid:

Type: Woven flat.
Abrasive resistant: High
Floatability (water resistance): High
Sinking ability: Low
Casting ability, recoil off the spool: High
Primary knot strength: High
Secondary knot strength: High
Dry breaking strain: High
Wet breaking strain: High
Weakness: Fraying after a period of time.
Marks out of 5: 4

Things to look out for when choosing your braided line:

One thing that I have found out about the fusion type braids is that, when they have been broken and then retied and broken again the braking strain can be at least 50% less than the first brake this is due to the individual fibres damaging further up the line resulting in the weakening of the line of upto a yard.

Also they tend to be a little stiffer and course which can cause friction on the cast and also on the line passing through the rings and the wheel of the alarms almost making the run “bitty” and jagged. This is why I personally prefer woven type braids they are a lot smoother on the rings and on the take. The ones I recommend are fireline only for durability and good breaking knot strength, Nash bullet and Magi-braid from this list.

I have been using braided lines for my fishing for 8 years now and I don't think I will ever go back to using monofilament line again as in order to create a bolt rig for eels or other big hard fighting species, braid is paramount in the design of the whole concept of the way I fish today. Another aspect to consider is choosing the right properties of braided lines to suit the style of fishing that you do on a regular basis as for me floating braids are more suited due to fishing off-bottom rigs as I mainly have canals and heavily dense weedy waters to go at, if on the other hand I had large expanse of waters with very little weed or gravel make up then sinking braids may be more suited.

Another factor to consider is that when using open bail arms on the reels they tend to skip over the wheels of alarms so I had to incorporate a device to put pressure on the line before passing over the alarm which attaches to the rod and a stiff silicone bar traps the line on the speaker causing enough resistance to sound the alarm. Unless you possess the more expensive alarms with vibration facilities and don't use a magnetic wheel.

The other aspect is cost, but if you follow the rule with mono of changing the line every 6-12 months depending on the abuse it receives this can cost you with some of the up market lines up to £40 per season for 1000 yrds and the cost of braids average about £40 -£70 a spool of 300 yrds to 500 yrds but you can get about 3-5 seasons on the same spool no matter what abuse it takes, it works out cheaper in the long run. Another aspect you have to consider is the rods progressive to through are more suitable.

Hook links:

I have always used braid for hook-links as well which I haven't had one bitten through yet. There have been only two varieties that I have used over the years. The first I have used for many years in the beginning being 35lb Quicksilver, which has served me well and probably still be using if it wasn't for the cost and the amount you get for your money. That's why I changed over to the E.S.P Sonar 45lb braid which is even better than Quicksilver and half the price and is green “Brilliant!” I have been using Sonar for about three seasons now and it hasn't let me down yet.

I won't use wire if my life depended on it fishing for eels. What I like about using braided hook links is the flexibility of the presentation you have unlike wire, even with the newer types you can tie from Drennan, believe me I have tried and tested all types of lines in my time, even spending a full week in the weedy days of testing different knots and their breaking strengths (George Sheridan Carp and the Carp Angler has a great section on this research).

Hooks:

When I started fishing for eels about 9 almost 10 years ago I used to use various hooks, from Jack Hiltons Z1 range, Drennan Boilie hooks and various Mustard fly long shanked hooks, even Continentals and Owners.

I have been very keen on the E.S.P range for many years using various patterns from T6 and at the moment the G4 Stiff-rigger range using a small pattern no bigger than a size six as the years before I was using size 2 T6 Raptors.

Hooks are a personal choice and a major confidence matter, but because I use braid straight through a good strong hook is essential and all of the E.S.P are very strong and sharp with a good record of not pulling out under extreme pressure over the last 5 years even in the smaller sizes. The reason for going smaller was down to the size of the eels heads and secondly smaller hooks seem to be less damaging to the eel incase deep hooking did occur as all the vital organs are situated behind the eels head.

Using micro barbs also are less damaging than barbless hooks, as barbless will tend to go deeper and can slip and tear in the playing process. The only down fall to the E.S.P range is that they are non-corrosive and will take longer to rot and break, but on the other hand due to the barb reducing penetration to the bend the eel has the ability to work the hook out in a matter of time.

Choice of leads:

This also could be another factor, not using the right lead for the bed, so to speak. This can only be found out by leading a swim before fishing, but how many of us do this? There is no point fishing a distance lead on a hard bottom as the lead will have no stability or grip and a flat heavier than normal lead would be more suitable either a ball or pear shaped lead, or if silt is present using a torpedo type lead to help anchor the rig firmly, but something that most of us may do that we shouldn't do when fishing fixed rigs is pull the lead out after casting out?

You should cast the rig and then tighten on to it, if you don't get it in the right spot then recast it until it is in the right spot! Even if it is 6 attempts. Choosing the right lead for the lake bed we are fishing is important, even the small things can make a difference. I like to use a half and half distance torpedo/dumpy type lead from Korda this is a great all round lead using from 3-4 oz leads at the moment I am using on average 3½ oz leads as a secondary bolt mechanism as the indicator clip and resistance is the first bolt mechanism.

Floats for off-bottom fishing:

The bigger the better Jimmy makes our floats which are half a size bigger than the large fox sunken floats; the smallest float I would use would be a large fox float. I quite like the foam type floats as they can take a bit of abuse from the fox range and seem a lot more buoyant for their size and far better than their predecessors. But make sure the lead is heavy enough to anchor the whole rig when using off bottom rigs.

Skylining rods:

I have also been "skylining" my rods on the pod for two reasons, secondly it keeps a majority of the line off the bottom and also the tips are set against the night sky so I can see any movement of the tips as a secondary indication (I tend not to sleep at night if I can help it) and thirdly to reduce the curve in the line to the rig, with the conjunction of using large floats this is minimised even more This is also important when fishing at distance with off-bottom rigs, but it will never be eradicated as gravity plays a part and there is nothing you can do about that. The only problem fishing this way is the occasional bat hitting the line, but due the tight clips it is very rarely they get pulled out. This hasn't affected the run ratio or missed and aborted takes at all. All these factors could have an effect on using bolt rigs if the wrong choice in the equation is made, you have to get it spot on, other wise runs will happen and no connection is made, but on the other hand a missed run is better than a deep-hooked eel.

Obviously I am not saying this is the way you should be fishing, only if you decide to, you will have to analyse your equipment and tackle used and change it to how you fish as with Steve Cotton who tightened his bait-runners up and the next take the eel was hooked and lip-hooked at that, this is a great result and the only feed back I have had thanks for that Steve!

Hook link presentations:

This to me is the most important part of the set-up as this is the part that makes the connection in the first place, poorly mounted baits without much thought will cause missed runs, but this should be common sense. We have the capabilities to adapt proven rigs used effectively for other species to our own fishing with a bit of thought and trail and error.

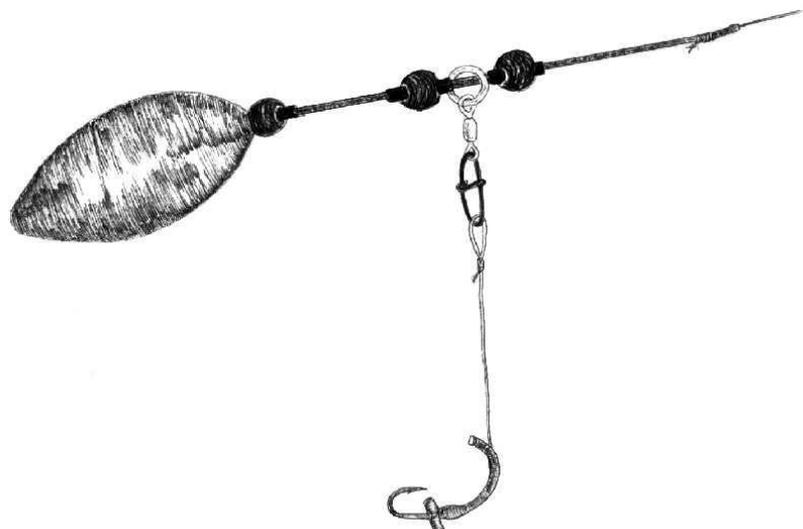
Since the usage of the “Whithy-Pool” Have also been using “aligner” rigs as well and will be using them more this season, as with any idea things progress for better performance for me not just because I’m a rig fanatic. I’m trying to reduce my deep-hooking and analysing the reasons behind it to prevent it which has been very successful to me, something that was said to me when I first joined the N.A.C all that time ago and recently read in an article that it is a part of eel fishing, I don’t agree with this and have strived over the years to eventually come up with a solution to this problem.

This is why I personally love fishing for eels as it is pioneering, exciting and challenging, just like carp fishing was all “hush hush”! And still in its early stages this was before “Maddocks” became famous and opened the door on what was actually going on in the carp scene in the early eighties.

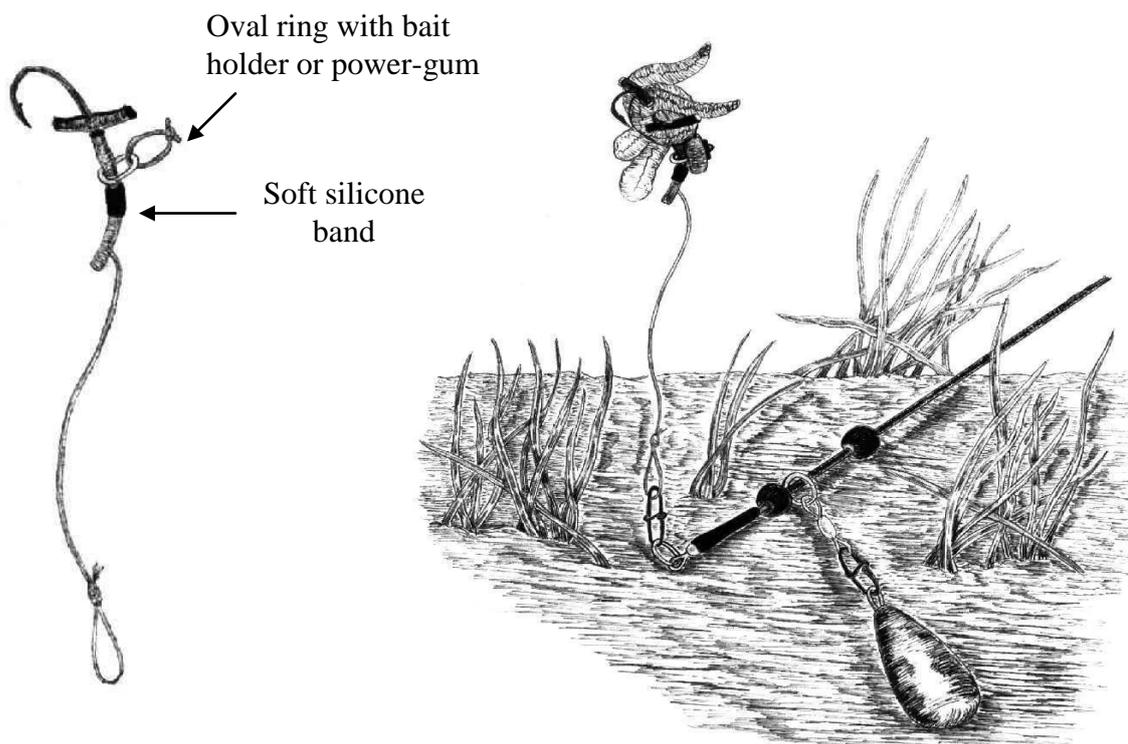
The “Aligner Rig”:

Due to fact that I don’t use wire as my hook-link material this gives me the flexibility to use various presentation to perfect a better hooking system unlike you can get with wire, but the question is why? My reason is to cut down on deep-hooking for all our benefits. This type of hook presentation has been around for many years in the carp scene and is a step up from the “Whithy Pool Rig” and seems a better way of presenting worms on the Dyson as you will see in the diagrams below.

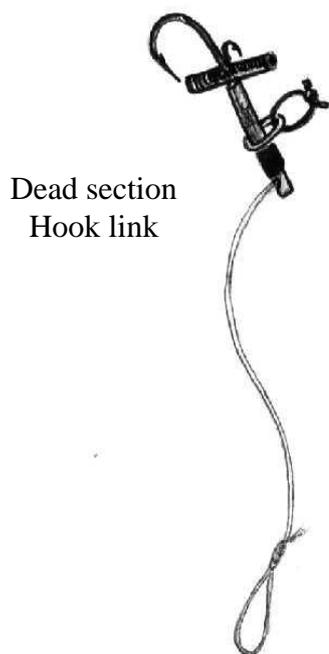
This is still using shrink rap to create a bend or extension, the difference between this and the Withy rig is that the tubing is half the length and the line is fed through the back creating a anti-deep hooking hook link as the extension curves around the outside of the eels mouth when presented on a Dyson rig or popped off the bottom, but a better alignment for the take is achieved. As shown in the diagram below.



Another idea I have had with presentation with worms is by using oval E.S.P large rings as shown in the diagrams below.



As you can see from the diagram on the oval ring is a loop of power-gum or bait holders for pellets, this is for the attachment of a piece of buoyant foam to suspend the bait as shown in the right diagram combined with a fixed ledger rig when using worm baits. The back bead can be slid off the tubing to create a running rig using the indicator clips as the “Bolt” mechanism. In theory this should work, but obviously moderations may have to be made somewhere in the equation to make an effective method.



The same idea can be utilised for the usage of fish sections creating a more secure hold when the bait is cast at any distance keeping the hook link to a short length of more than 4-6 inches. The power gum with it being elastic can be rigged through the fish and using a piece of foam in the fish section and a bait-stopper will secure the bait for impact of the cast and pop the bait up at the same time.

Critically balancing the bait can be done via shot or rig putty to suit the nature of the bottom, making the bait have a natural movement so to speak, with the choice of popping straight off the lead or so having it gently settles on the silt or small weed or algae beds as the eel sucks in the bait like a carp and not grab it as you may think, because it is a predator. I have come to the conclusion that eels behave differently on their approach on how they take the bait depending on how we present them in the first place.

Hopefully these scenarios and reason may make you think about your own style of fishing as I have done, understanding the reason behind deep hooking and knowing the causes of the possible problems you could start eradicating them to have the same results that I have had and hopefully will continue to have.

With respect “The Burglar”