Virtual Fisheries Forum |16/01/2024 | Creating Habitat on a Stillwater Fishery

Q & A SESSION

Q. Any advice regarding the pros and cons of an aeration system using 3 solar panels and eight linear diffusors would be much appreciated. The pool in 6.5 acres and we plan to position the panels out on the pool?

A. (Paul Coulson) – Not my area of expertise. I can say, keep them safe from the risk of theft. They do work well during the day but will require battery back-up for the night (the most important part of any 24 hour period for dissolved oxygen level crashes). May be worth speaking with your local EA contact in this regard also.

Q. What methods are there to calculate the biomass of a lake which are available to clubs without excessive cost?

A. (Paul Coulson) – This is a very difficult thing to calculate – unless you can of course do this at the point of stocking. Netting is probably the best way of achieving this – is this isn't feasible; anglers catch rates can be logged and used to help calculate it. Fish finders can be helpful also.

Q. Great idea planting but if fisheries have depth restrictions, plants like, water lily can become invasive and take over a water. which can have a detrimental effect especially when dying off adding detritus to waters. The issues come when trying to control them.?

A. (Paul Coulson) – Most likely this is Fringe Water Lily – it can be difficult to control once established. These are ornamental and are often put in fisheries

as they look nice in back garden ponds. They can be hand cut and the rhizomes removed but it is hard work. Be careful not to kill the entire plant, as they do provide some benefits to the fishery i.e fish cover etc. Sprayed herbicides can be used to control them – but speak to your local EA fisheries officer beforehand. Advice would be to make sure you are planting the right type of lily in the first place – don't purchase from a garden centre, seek the advice of a specialist grower who specialises in native aquatic plants.

Q. We rent a public park pond, dug in the 70's, it's a fully lined pond and we do not have any sub surface vegetation, how can we improve this? We have tried floating islands, but these get bombed by ducks, geese etc?

A. (Paul Coulson) – A floating Island is ideal – but you must construct them with a bird deterrent mesh to start with – otherwise the waterfowl will destroy the structure by eating the newly planted shoots and by repeated movements on and off the island. Marginal plants can be introduced using pre-seeded/planted coyer matting and rolls. Or hessian sack with a suitable aquatic growing medium – again pre-loaded / planted with appropriate marginal varieties.

Q. Speaking on behalf of P&DAA. How would you address issues with spawning areas becoming unused due to the predator evasion behaviour of fish? For context we have historically successful spawning gravels at Castor Backwater on the River Nene, including improvements and expansion as a result of fisheries improvement projects with the Environment Agency but we are seeing a severe decline in usage due to the increased presence of otters and cormorants, leading to a lack of recruitment and declining catch returns. The fish are displaying unwillingness to relocate for spawning and are instead failing to spawn during the regular time period.?

A. (Paul Coulson) – It is likely they have moved away from this area of potential predation. Perhaps look at developing an alternative area or make the existing area harder for the predators to access the fish stocks (fish cover / fish refuge area etc).

Q. Have you any tips for controlling crayfish in lakes?

A. (Paul Coulson) – Crayfish are a very difficult and persistent invasive creature to control. It very much depends on where you are located, what your Stillwater is like - how deep, the contour and banks etc. Continued trapping is probably the best approach, but this need to be done with conviction and a

plan put in place including monitoring. You can rid a water of them and they will quickly return – particularly is there is a nearby river which is also affected. Have a look on-line for any current or previous projects which may have been successful and learn from those methods.

Q. Where/how is the best way to source margin vegetation for a newly dug out lake (approx. 1 1/2 acres)?

A. (Paul Coulson) – There are loads of specialist nurseries selling appropriate marginal and aquatic plants, I recommend searching locally to your area. Avoid transplanting from areas away from your lake as you may bring in unwanted pathogens / invasive nonnative species. Transplanting from another lake within your complex would be fine though.

Q. With a mindset that habitat is vitally important, on the flip side of this, how do we address the argument that increased habitat and more successful recruitment is also essentially increasing the larder' for predation, evidentially leading to an increase in cormorant numbers as an example, evidenced at Ferry Meadows where we are currently undertaking several FIP projects? At what point is a critical point of action to tackle predation directly required - They are frequenting locally to the areas with a feeling of wanting to spawn but are failing to do so successfully as they are repeatedly scared off?

A. (Paul Coulson) - Obviously you are doing something right, as the fish numbers are clearly good. Predators will always be something that need managing and this will continue as long as bait / smaller fish are present.

Q. My lake is next to the river Trent. The river floods and raw sewage comes into my lake bringing huge amounts of nitrates and phosphates. I work so hard to improve the water quality then the river floods and I get massive weed growths and problems with algae. I treat the algae and the weed grows even more. Any advice on what I can I do?

A. (Paul Coulson) – This is a difficult problem and I sympathise. Water from an outside source particularly floodwater will carry a lot of nutrients. Try to reduce the algae growth with the use of pond dyes, additional aeration can help also, along with Barley straw deposited around the lake in mesh sacks. Increased planting of marginal plants will aid the take up of the nitrates (reed beds and the like). There are products on the market that you can add to lock up the phosphates in the pond sediments but they are quite expensive.

Q. Can you 'trace' an algal bloom? i.e. does where it goes green first always point to the source of nitrates?

A. (Paul Coulson) – This would be very difficult to trace as it's source could be some distance from your affected area.

Q. Any advice on control of reed we are finding they progress out into the lake over the years making more bank and less lake, should they be cut or burnt every two years or so?

A. (Paul Coulson) - Reed can and should be cut and removed within your fishery maintenance plan - but remember to also remove some of the rhizomes as the part you can see above the water, is just part of the plant.

Q. Your thoughts on introducing bait fish into a trout lake (3 acres) stocked with Rainbows and browns now in the region of 4 lbs?

A. (Paul Coulson) – I'm not sure this would be beneficial long term as, by doing this, you would be adding to the biomass within the water (assuming you are thinking of doing this because the trout are exhausting the natural food larder) – it would be better to improve the habitat which will encourage invertebrate life, which will in turn feed the trout.

Q. We have a still water lake approx. 1.5 acres with depths from 8-12ft. We never manage to get dissolved oxygen levels to stay above 70% even in winter. We have installed 2 floating islands in place ready for next season and in process of removing some trees to increase wind movement across lake. We also have 2 aerators on timers as well. Do you think there is an issue with dissolved oxygen levels as lake always has signs of a lot of fish fry?

A. (Paul Coulson) – 8- 12ft is a good depth – you will have a good thermal profile. Perhaps cut some trees down to increase wind across the water. If there are no signs of fish in distress and they are spawning, the water quality isn't too much of an issue. The low DO could be linked to bacterial activity as they breakdown organic material such as leaf litter, fish waste etc –

Q. One benefit of fringe lily is that it'll only grow in up to about 3-4 feet of water. I have it in my 22-acre lake which, apart from narrow, shallow margins,

averages around 16'+ in depth. The fringe lily adds greatly to the habitat but simply doesn't/can't become a problem?

A. (Paul Coulson) – Correct, this sounds like the right plant in the right location.

Q. Can concrete pipe sections be used to contain root growth for lilies?

A. (Paul Coulson) – Perhaps, for a while, but the rhizomes will find their way out eventually and the plant will then spread beyond the concrete sections.

Q. How can we make a 20-acre lake shared with a golf course better in the winter months - fishing is fantastic in summer as fed by the river, but winter fishing is blank?

A. (Paul Coulson) – Difficult - when you factor in the river. Floating island will help. Perhaps the water clarity in winter is encouraging predator and this in turn is unsettling/ moving the fish and they could be shoaled up in one corner. So improved fish sanctuaries will help.

Q. Sources of plants and advice for in river planting (Derbyshire Wye)?

A. (Paul Coulson) – Speak to the wild trout trust https://www.wildtrout.org/ and if you have existing plant established – transplant these and or look for specialist nurseries on-line.

Key contacts from this forum meeting: -

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