



Newsletter of the Association of Midland Goldfish Keepers

RELAUNCH OF OUR WEBSITE

The Association of Midland Goldfish Keepers

The society comprises dedicated goldfish keepers committed to the care and breeding of goldfish



NEW CONTENT ADDED

APRIL 2021 Contents of this issue

DISCLAIMER

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THE PRESIDENT



The last 12 months has been a period of time that has had a devastating effect on our way of life and the way that we like to live it, with people's health being at the centre of things along with dealing with this deadly virus.

During this period of time many of our members have had health problems where they have had to shield themselves, some like myself and Jim Amos, our former president, have suffered from serious, Non-Covid, illness during this difficult time and some of our members have suffered bereavement caused by both Covid and non-Covid illness. On behalf of myself as president and the A.M.G.K. membership, I wish to offer our condolences to all those affected by bereavement and best wishes of get well soon to all of those who have been unwell during this pandemic.

AN ASSESSMENT OF WHERE WE ARE NOW

During the pandemic all our physical shows and meetings have stopped and people have turned to a different way of communicating.

The Bristol Society has hosted zoom meetings and good use has been made of the various Facebook pages with our own page receiving many interesting posts from members. All of these modern ways of communication have been invaluable during this period of time. Things are slowly moving forward in the UK, but other areas of the world are in a desperate situation with India being the main focus at the moment, for the Covid-19 pandemic. There are some several serious variants of this virus that are still to be brought under control, so with this in mind, we as a "hands on club" must be careful on what we plan to do going forward and we must plan to do this in a "Covid Safe" way to enable everyone to enjoy the hobby that we love so much.

Having thought long and hard about this, taking time to speak to various members of the club, it would be fair to say that we should NOT attempt to stage any kind of physical meeting or show until such time as it can be done safely. This will disappoint some of our members, but we must err on the side of caution and be confident that we can act safely. Once we reach a point where things are safe, we can hopefully have meetings and shows once again staged in the style that we love so much.

Andrew Barton

CHAIRMAN'S REPORT APRIL 2021



Hi everyone

Hope everyone is well and behaving themselves, we are not completely out of lockdown just yet.

Grahame has been busy working on a new AMGK website and all is looking good. Pat has been busy keeping everyone's moral up, you just can't keep him quiet, but I must say he is a very good assistant!

Pat has covered elsewhere in this issue most of what has been happening with the likes of the brine shrimp etc.

To me it's looking unlikely we will have a show this year, there are too many obstacles to overcome to be safe, comfortable and also peace of mind to enjoy what is normally a good relaxing day out (let's be sensible).

On a sad note, Dave Roberts (NGPS) has recently and unexpectedly passed away, so on behalf of the club we send our sympathies to his family.

There is talk of a club meeting later in the year, if safe to do so. Let us hope so.

Regards to all.

Phil

AMGK CHAIRMAN

Thanks to June Pons

We owe a great debt too to June for editing this issue of our magazine, despite already retiring from the task. Excellent job June and hope that this might just be your last at long last. I have been informed that we might have one volunteer to take on this task in the future, but please, any help to continue this most effective way of communicating with members and the rest of the world would be most welcome.

AMGK Meetings and Nationwide Goldfish Societies UK National Fancy Goldfish Open Show 2021

We have now had over twelve months without any physical society meetings, missing two AMGK Open Shows and having to cancel the 2020 Nationwide National Open Show.

We had hoped that the Covid situation for the country would be over by now but, alas, the pandemic has hit the whole world much harder than early sceptics anticipated. However, we are beginning to see some relief in the UK and hopefully see some 'normality' as the summer months progress. It is hoped that we might be able to have at least one club meeting before the year is out with tentative preparations being underway, without prejudice, beginning with a view to staging a National Show for the Nationwide Goldfish Societies UK in October.

Members are asked to report and make known any willingness to exhibit their fish and help with any preparations required for such meetings and shows. Enquiries are being made to the staff that administrate venues to ascertain their thoughts and possible requirements before we can confirm a future booking, with the Government and, more importantly, the Science and Public Liability Insurances informing a final decision. As soon as we obtain a general willingness from sufficient member numbers to help and partake in principle, we will let members know where we might go on our road to normality.



These are exceptional times, and we must be mindful of individual member's and exhibitors and visitor's concerns and fears. We will get there, I'm sure, but only time will tell when.

In the meantime we still have our Facebook page, YouTube, Website and a few of us possess zoom facilities to keep in touch with each other and all new members as they join us month on month.

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AMGK WEBSITE RELAUNCH!

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We are, once again, indebted to Grahame, our webmaster, for spending many, many months overhauling our existing AMGK website (originally put together spending equally many hours by June Pons, a few years ago).

He has brought not only his vast professional experience to the task but also his natural design ability to make it a pleasure to view and use. Whilst the website can be viewed by any interested party from anywhere around the world who has an interest in anything goldfish related, all members are now able to advertise their surplus stock and seek new stock from other members as required from time to time. This is particularly good timing due to the current restrictions, preventing face to face club meetings and open shows etc.,

The website also now has a fish diary, easy access calculations for water volume, basic medicines calculations etc., and a host of other goodies. Through links to the **Nationwide Goldfish Societies UK** website (another one of Grahame's volunteered masterpieces) anyone can now find a breeder of a particular goldfish variety through a 'full list' compiled over a week of effort 'phoning, emailing and discussions etc., two years ago. with each breeder's stock list and society membership. Contact still has to be made initially through the relevant society secretarial contact, (also on the website) to comply with Data protection protocol. The initial drafts of the revised website have been viewed by the AMGK committee with additional suggestions compiled and modified as appropriate over the last few weeks. Although now live for all to see, it is a flexible electronic document and always open for additional ideas and information to improve communication within the hobby and to spread the word to an ever wider audience.

Our website has always been a great catalyst of interest for hobbyists from around the world, with favourable comments and questions being received on a regular basis by our society secretary, Hon Treasurer and **YouTube** site through Laurence (master of the fish movie!!)

Members are asked to look at the website and to use all its facilities for the betterment of your Hobby. All members who have an email address will be messaged by Grahame shortly with an Individual and personal code to enter parts and functions that it's felt only paid-up members should have access. You can now, join, re-join and pay membership through the website too. Merchandise can also be ordered and purchased in a new section, similar to the one on the **Nationwide:** website. Society members will be able to look at a range of products, that will be added to over time, and order various items with the AMGK logo printed on (or any artwork of their choice sent to the supplier). At no cost to the society or website, your orders are made to order, with up to 10% sent automatically to the Society's bank account to add to club funds. Many thanks for your personal time and great effort Grahame, it's much appreciated.

Pat Davies

THE PRESIDENT'S FISH HOUSES

During the lockdowns I have been busy reorganising my fish house set up and I have now completed my third fish house, which is situated at the bottom of the garden. This fish house was designed with the intension of housing all of the adult fish, which would then free up space in the other two fish houses to have one for young fish and one for all of the baby fish.







The greenhouse now has all of last year's young fish in it and will be used to grow on the fish until they are adult fish, then they can be moved into the adult fish house at the bottom of the garden.





The original chalet has now been turned over to rearing all of the baby fish, it is the only building that I heat and is very well insulated, I felt that having everything all in one place was a sensible idea and the rearing of the baby fish could be managed in a better way.





The next article will be on how I am doing with all of the fish......to be continued

BRINE SHRIMP ORDERS

After many months of trying to sort out our Society's order for Brine Shrimp Eggs, due to difficulties experienced with British Customs and Import Duties etc., we have, at last, secured enough cans to fulfil all our pre-orders.

Most members should now be in possession of their order and our thanks have to go to Phil Hurford of Yorkshire Brine Shrimp, for sourcing the eggs and dealing with all the importation and delivery hassles, to Phil (Chairman) for storing the order over the winter period and for Mick Smith and Grahame Draper for being essential parts of the convoluted delivery relay team that went into action as soon as the most draconian of the Covid Government restrictions were lifted.

Let's hope that we all have a fantastic fish breeding season now to make the effort well worth while! (As this is being written 19.4.2021, Pat reports that he has his first (and unexpected) spawning of Bristol Shubunkins for this year. Others have also reported spawnings and are waiting for the hatch!

Quick list of known fish bred by Members of AMGK so far this season with Nationwide Standards:-

Andy Barton

Calico and Metallic Veiltails, Metallic and Calico Lionheads, London Shubunkins, Tosakin, Calico and Metallic Fantails, Calico and Metallic Pom-pons, Black Ranchu and London Shubunkins.

Mick Smith

London Shubunkins

Liam Roberts

Bristol Shubunkins and Moors

Tony Roberts

Bristol Shubunkins

Pat Davies

Bristol Shubunkins (hatch failure)

Mike Kirkham

Bristol Shubunkins

Keith Mullin

Calico Veiltails

Fish bred without a Nationwide Standard

June Kemp

Metallic Fantail Orandas

This list may not be complete at the time of publication. A more complete list may be found on AMGK Facebook page.

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We have been informed that Bristol Aquarist Society (BAS) fully intend to hold their Open Show on Sunday 5th September 2021 (the only society open show for the year announced so far), depending on guidelines operational at the time, or failing that will hold another electronic show following last year's successful attempt. All members are asked to support BAS's ambitions.

A VIDEO OF LAST YEAR'S SHOW CAN BE VIEWED ON OUR YOUTUBE CHANNEL

Good Wishes to Jim Amos (AMGK Passed President and Life Member)

We have recently learned that Jim has gone through some terrible medical problems just before last Christmas, but now thankfully making slow but steady progress at home. Having spoken with both Jim and Jan recently, it was clear that Jim is coping with his recovery in his usual stoic way. With summer just around the corner he'll no doubt be enjoying time outside in his garden, tending his fabulous collection of Bonsai trees, ably supported by Jan (who is already coping well with lawn mowing duties and moving tree pots as required during his convalescence!)

DAVE ROBERTS

It is with great sadness and shock that we recently learned of the death, in February, of Dave Roberts, a member of NGPS and a good friend and supporter of the AMGK's Open show and also the National Fancy Goldfish Open Show (since its very beginning).

Dave started breeding and showing London Shubunkins quite a number of years ago, and although originally of poor colour quality (the fish that is) through perseverance and clever line breeding and selection came to produce some of the finest fish in the country.

In more recent years he qualified as a fish judge and always seemed to relish the challenges the breeders presented in attempting to make the right decisions on the show day. He was always very polite on show days to all exhibitors and, remarkably, took much time to discuss the exhibitor's fish with them that he had just judged; pointing out the aspects that he admired and indicating the minor 'faults' that he considered could do with improvement in the strain. (Always good to have an experienced second opinion on the overall quality of one's own stock from time to time, to keep us on our toes!).

He will be much missed at the NGPS annual open show as, for a number of years now he has been a king-pin in the organisation and the assembly and removal of the show. And what can I say about his legendary contribution to the magnificent raffle prize assembly! It was always worth going to the Northern show for the Raffle prizes alone.

He was a colourful character, with an unusual sense of humour and always passionate about the breeding hobby. Our thoughts will be with his wife and family for years to come, as I know he will be remembered whenever any of us, who knew him, get together. (once restrictions and the ever present virus allow).

Thanks for all your support Dave over your time in the hobby, and may you rest in peace.

In recognition of the various sponsors that support our Open Show and that of the National it is considered appropriate that we have a regular inclusion of the names in our published AMGK Goldfish Standard Magazine and include them in our electronic distribution of said magazine.

In addition, we would ask all members who use the products from our contributing sponsors to report on findings such as ease of use, fish appetite, water quality changes, growth rates of fish etc..

This will help all our members and be excellent feed back to fish food manufacturers and distributors that support each show.



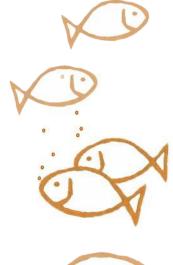














Chris Whitehurst's Articles Part One and Two

Many thanks to Chris Whitehurst for his lengthy and informative articles in this issue, with part three to come in our next publication.

It would be great if we could have articles from any of our 60 or more club members, during this pandemic particularly, it doesn't matter how long or short. It is surprising how much useful knowledge any of us has that's worth passing on in the absence of physical get togethers.

A Guide for Prospective and New Goldfish Keepers

Part I

Introduction

First let me introduce myself... My name is Chris Whitehurst, I have been keeping and breeding Goldfish from the age of four, (my Father was a guite successful tropical fish breeder and show man in the sixties and early seventies). I originally kept common Goldfish, these fish were obtained from the local funfairs and proudly taken home in a small plastic bag and kept in a corner of Dad's tropical fish-house in a collection of angle iron tanks and galvanised wash tubs of various sizes. I still have common Goldfish descended from these fish in my Fish house and in fifty six years have never had an outcross!! I moved on to Variegated Fantails at the age of ten, these being purchased from Colin Roe at Shirley Aquatics by Dad for me as he accidentally killed a tank full of fry using his infamous infusoria concoction. Once I left school at sixteen and started work as an apprentice Compositor I could afford more of the Fancy types of Goldfish and visited the Suttons establishment, purchasing fish that I thought at the time could improve my chosen types of fish, Bristol Shubunkins and Lionheads.



Young Bristol Shubunkin (at 9 weeks old)

I was befriended by the late Frank Close a true master in the Art of Goldfish breeding, who taught me so much about Goldfish and what to look for, I will always treasure my memories of times spent with Frank and his Aladdin's cave of a fish house, Bristol Shubunkins with unbelievable colour and finnage and Veiltails the size of Cricket

Balls with finnage like I had never seen before. Two other Top Breeders, Pat Davies and Tony Roberts have been very good mates to me over the years, helping me understand the intricacies of the Bristol Shubunkin. It was Pat who encouraged me to actually show my fish in the first place, by his own admission not one of his better ideas!!

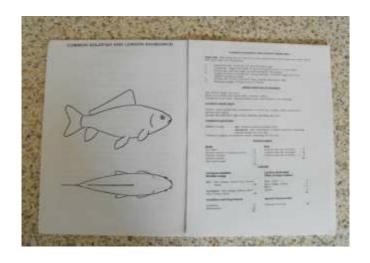


My Old Strain of Lionhead

This guide is intended to encourage people who, like me, have an interest in keeping and maintaining a strain of Goldfish.

Basic Advice

Join a local specialist Goldfish Society, there are five main Societies in England, Association of Midland Goldfish Keepers, (AMGK), based in the Midlands. North Eastern Goldfish Society (NEGS), based in the North East of England. Northern Goldfish and Pondkeepers Society, (NGPS), based in the Manchester area. Bristol Aquarist Society (BAS), Based in the Bristol area and The Goldfish Society of Great Britain (GSGB), based in London. All Clubs hold regular meetings and produce an informative newsletter on a regular basis. Each of the listed societies hold an annual Open Show, dedicated solely to Fancy Goldfish. These specialist societies are all members of the Nationwide Standards, and all the shows are judged to the Nationwide standards. The standards available to purchase from your chosen society and are a very useful guide for the breeder to critique their own fish.



Nationwide Standards

Do not be tempted by the fancy names of the societies. The specialist societies are all regional societies and all of the societies welcome newcomers with open arms and a wealth of information is available for the newcomer from the established membership. There is no benefit in joining multiple societies unless you are able to attend the meetings of all the societies you have joined to make the most of your subscription.

Everybody within the hobby starts with a couple of fish in a tank, some planted up with colourful gravel and once the bug bites decide to expand. Tanks can be kept within the house, so long as you have a supportive partner, but bear in mind the amount of tanks you will require, if and when you decide to breed the fish. Goldfish kept at a constant temperature within the home very rarely come into breeding condition. Goldfish need a cooling period followed by a gradual rise in temperature to condition them for breeding, along with this gradual temperature increase larger amounts of food, both dried and live food are required. At least two tanks are required if you decide to spawn one pair of fish, one tank for spawning the fish in and one for moving them into after spawning so as to avoid them eating the eggs. As the fry begin to grow, further tanks are required to separate the fry into for maximum growth. With the amount of food required for conditioning of the adult fish and growth of the fry the tanks will begin to smell. Water changes have to be done more frequently with the risk of spillages. Siphoning the bottom of the tank to remove uneaten food and detritus will help but, remember to replace the water with water of the same temperature to avoid shock to the fish, this requires a large receptacle to keep the water you are using for water changes in, and very soon

your house is taken over by your hobby. Bear in mind that water is heavy, will you have to strengthen your floor? It is little wonder that the majority of Goldfish Breeders have what they call a 'Fish House'. This is situated away from the living quarters and can be as basic or advanced as you can afford. More control of the water temperature is possible through artificial means if the tank is kept in a fish house, and by this method you can condition your fish to breed at a time that suits yourself, normally six weeks from the start of the conditioning process.

My advice is to visit as many hobbyists as is possible before you even buy a single specimen, the idea behind this is to get as many ideas as you can on layout and setup, adapt these to fit with the space and time you have available. Remember that what works for one person does not work for everyone. Do not be afraid to ask questions, no matter how trivial they may seem a little knowledge gained could save a lot of money in the long run.

After all your visits and chats with fellow Goldfish enthusiast you decide that a fish house is your preferred option.

When designing your fish house it is advisable to plan on paper several times rather than going straight in and building something that is totally unsuitable and unworkable and most of all expensive!!! Remember to factor into your design accessibility, none of us remain 21 forever. If built properly your fish house should last a lifetime in the same layout. You should be able to access all corners of every tank without over stretching or hanging onto a corner of a tank. Glass is very sharp when broken and cuts through flesh like a hot knife through butter (as I found out a few years ago).

Tank sizes vary greatly but a general consensus is the depth needs be no greater than eight inches for the majority of Fancy Goldfish varieties, the main exception being the Veiltail, although this is more of an advanced fancier's variety.

I have found that a tank measuring 4 feet by 2 feet will comfortably house 20 Bristol Shubunkins/Common Goldfish and allow them to grow, providing that basic husbandry and a continual supply of clean water and good quality food are provided.

When keeping a tank of Goldfish for decorative purposes you can get away with keeping several types of fish of both sexes in a

single tank with basic biological filtration, when you decide to breed and raise your own fish things become a lot more involved, and tank space becomes more of an issue. A single pair of average size Goldfish is capable of producing 3,000 fry in a single spawning, depending on the type of goldfish you are keeping it can take several weeks until the fry can be sorted, (This will be covered in more depth in a later part).

Fish need space and food to grow and remember that over-crowding will produce stunted fish. Goldfish are messy feeders and produce a lot of waste. This must be removed from the tank on a daily basis and the ammonia produced by the fish through the vent and gills must be diluted sufficiently to prevent problems occurring. The best method for water changes is a drip system; this involves water dripping into the tank on a continual basis and requires the tank to be drilled to facilitate an overflow system. This system can be adapted to suit any water type, (I am lucky enough to live in an area supplied by Severn Trent Water and my water comes out of the tap at a ph of 7.0 neutral). Many inline water purifiers are available for very little cost from DIY stores or online suppliers.

Your Fish House

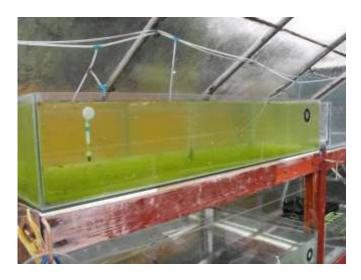
So you have visited several Goldfish Breeders fish houses and feel that this is the hobby for you, you have seen fish houses made from sheds, greenhouses and conservatories. You have opted for your own fish house and have planned the layout several times on paper and now know exactly the layout of your fish house, always remember to plan in your drainage before laying out the foundations. Are you on a water meter? If you are, you will have to plan in a way of recirculating the water after filtering, if not congratulations, things have just got a lot easier, waste water can be simply flushed down the drain as new water trickles into the tanks. A simple 12 foot by 8 foot Greenhouse can comfortably house 18 x 4' x 2' tanks, nine on each side with a four foot walkway in the middle.

It does not matter how careful you are, water will splash from the tanks. If you have built your staging from wood, always treat it with a good quality wood preservative. If built from metal always inspect for signs of rotting, replace any damaged timber/metal as soon as possible, prevention is better than cure.



Fish House Layout
(The smaller tank top right is used for sorting young fish)

You will have to have an electricity supply to the fish house to run an air pump and heaters etc. Remember, Water and Electricity do not mix, make sure this is professionally fitted and complies to building regulations so it is totally safe.



4' x 2' x 8" Tank (This tank is currently housing 500 x 3 week old Lionheads)

Tanks can be custom made by aquarium manufacturers or alternatively if you are even slightly handy you can make your own. All you will need is the glass cut to size, (ask the glass supplier to grind down the edges of the glass to avoid potential cutting hazards. Also at this time it may be worth asking them to drill the overflow hole for you), a tube of clear silicone, (there is no need to go to the expense of buying dow corning silicone, general clear bathroom silicone sealant purchased from DIY stores is just the same thing only a fraction of the price). Masking tape or Sellotape to hold the tank together till the silicone

'goes off' and a glass drill, this is to cut the hole for the bottom drain on the tank, If your glass merchant is unable or unwilling to drill the glass for you, (these can be purchased online at TA Aquaculture, based in Redditch). Only drill the tank once it is glued together, you will need a small amount of water in the bottom of the tank once you start drilling the hole to prevent the glass heating excessively and cracking, (Your glass merchant can do this flat as they have specialist water cooled equipment).

Starting Up

During your visits to Goldfish Breeders fish houses, you have seen fish that you could just stare at all day in all colours, shapes and sizes. Where to start? What type of fish to keep?

My advice would be start out with the simpler single tail fish types, Common Goldfish or London Shubunkin, these are by no means easy fish to breed to the standard but being simple torpedo bodied single tails are easier to get nearer to the standard than the more fancy types of single tails, Bristol Shubunkins and Comets, and the round bodied fish, such as Fantails, Veiltails, Ryukin etc. After you have gained some experience breeding with these types of fish you can then move on to the more exotic shaped and tailed fish and even try your hand at twin tailed varieties. As previously stated, this is a guide, some breeders have successfully gone straight in and kept only one of the fancier types and have been most successful at breeding and showing them.

With Fancy Goldfish the shapes and types are endless.

The types of single tail Goldfish that are currently recognised by the Nationwide Standards are:- Common Goldfish, London Shubunkin, Comet Goldfish and Bristol Shubunkin, all single tailed fish have a single anal fin.

Twin Tailed with torpedo shaped body:- Jikin or Peacock Tail.

Twin Tailed fish (short squat fish with round bodies):- Fantail, Pearlscale, Veiltail, Broadtail Moor, Globe Eye, Oranda, Red Cap and Ryukin

Twin Tailed fish without a dorsal fin: - Lionhead, Bubble Eye, Celestial, Pom Pon and Ranchu, all twin tailed fish have twin anal fins.

At the present time, one further fish has had its standards finalised by delegates from the National Clubs that form the Nationwide

Standards Committee This fish will be classified separately being a round bodied fish but the caudal fin (tail) is not split but forms a complete graceful apron flowing behind the fish, this is the Tosakin.

When purchasing your initial stock always try to get the best fish that you can afford and buy all your particular type from one single breeder for the basis of your strain. A mix of Males and Females should be acquired, do not worry if the fish you purchase are not the best in the fish house, you are buying the blood line of fish, many breeders have spent years developing their particular strain and the fish you are getting are capable of breeding fish of an equal quality to the best that particular breeder owns. Once you have bred this strain of fish for a couple of years you will know what to look for when you are looking for an outcross to strengthen that particular strain. Always try to breed from the fish you have bred, either son back to mother, daughter to father, or brother to sister, never be tempted to just breed the same fish year after year, you will never improve on the fish you bred the first year, with an outcross you are now well on your way to developing your own strain of fish.

Never be tempted to take on too many varieties of Goldfish too soon unless you have acres of glass and the amount of tanks necessary to house and raise the fry from every spawning, too many people become disillusioned with the hobby after spending a small fortune on fish and equipment only to find that they do not have the time or room to rear the amount of fish necessary to breed that show stopper.

Do not be disillusioned at your first show if you do not pick up that elusive prize card, the classes are judged by one single judge, after judging ask the judge what he thought of the fish, and then get the opinions of several fellow competitors, opinions are freely given, take on board what is said, many lasting friendships have arisen from friendly rivalry.

The top breeders of Fancy Goldfish only keep 2 - 3 varieties of Goldfish and maintain these lines of fish to regularly pick up the top honours at the specialist Goldfish Shows up and down the country. The more types of fish you keep the less time you have to dedicate to individual spawning's, for sorting and growing that show stopper you will need as previously mentioned, tank space and a good quality, varied diet for the fish, neither of which is cheap.

A Guide for Prospective and New Goldfish Keepers Part II

In Part I we discussed the basics of embarking on your new hobby, assuming you have made your choices in types of fish and type of housing for your fish we will now go into depth the conditioning of your fish for breeding and care of the fry through to the second sort. After the many questions you have asked of the breeder of your chosen type one most important question would be..... do the fish spawn every year? I personally have a strain of Lionheads where the females will only spawn every second year!! Assuming you have both Males and Females, following this guide should ensure that your fish will breed.

Conditioning for breeding

I will start with the basics. First of all ensure you have both Males and Females. Tubercles (small white pimples on the gill plates and pectoral fins) are generally a sign that the fish is a Male, (this is not always fool proof, I have had females that have developed tubercles and would pass for Males), the Females are generally fuller bodied fish (more rounded in appearance). Look at your fish closely concentrate mainly on the pectoral fins, in the Male the leading ray of the pectoral fin is thicker than all the other rays, in the Female the rays are of a uniform thickness. The vent area of the fish is the next place to look but is not always as obvious as the pectoral fins, in the male generally the vent in concave, (slightly indented) and in the female convex (slightly bulging).



Male (Showing tubercles on leading edge of pectoral fin)

Conditioning the adults should start in the previous autumn, good quality food and a clean

environment will produce a healthy adult fish. When the temperature starts to drop it is time to change the feeding regime, the occasional feeding of live food or frozen live food is beneficial, remove any uneaten food after a period of around 15 minutes so as not to affect the quality of the water, begin using wheat germ pellets also once or twice a week when you notice the fish looking for food. When you notice that the fish are lethargic stop feeding, this has no detrimental effect on the fish and is part of the natural cycle for the fish.



Female (Note the thinner leading edge to the pectoral fin)

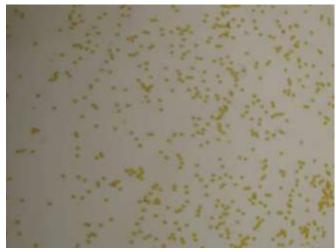
Around August the Open Shows hold classes for current year fish, this means that the fish should have been spawned, hatched and grown in that current year, so to have a fish of around 5 months old at the first show you would need to start your conditioning of the adults around the second week of February.

Ensure that your breeding tanks are clean and ready to receive the adult fish you wish to breed from, if you have sterilised the tanks with either diluted bleach or Milton solution make sure that they are thoroughly flushed through with no trace of either cleaning liquid. For best results a bare bottom tank will be best. Introduce the fish and leave to settle for a couple of days to a week, during this period do not attempt to feed the fish, they should have plenty of reserves carried over from the previous autumn, after a couple of days add a reliable heater/stat. Make sure that this is

set to its absolute minimum, leave the heater/stat in the water to settle before plugging in, bear in mind the temperature of the water in February can be as low as 40 degrees. I personally use a 50 watt heater in a 4 x 2 tank, the idea is to raise the temperature of the water by around 1 degree every three days, once the water hits around 50 -55 degrees you can start to feed the fish, I use frozen bloodworm as a first feed, only feed sparingly and remove any uneaten food after 15 minutes. As the water temperature rises the fish will be actively looking for food, the feeding regime can then be increased, use high quality feeds and introduce chopped earthworms to their diet, this is the time to separate the sexes, keep increasing the temperature until it reaches the 60 degree mark. Once the temperature has reached this level it is time to introduce the Males back to the Females and to put in some spawning media for the fish. Woolen mops or nets are very beneficial. Unless you only have a single pair of your desired strain the best ratio is two Males to one Female.

Spawning

Generally the fish will spawn the following morning after the introduction, if this fails you can induce spawning by adding cold water from a hose pipe, this acts as a natural stimulant. The Male fish will start the chase with the female, nuzzling at the vent, he will then position himself at the side of the female and will quiver against her releasing milt as she releases her eggs. This can carry on over a period of several hours depending on the size of the female fish.



Viable spawn

Once the fish have spawned remove them from the spawning tank making sure that the temperature of the water in the tank that you are

moving the adults to is the same temperature as the water in the breeding tank. If space allows separate the sexes as an over amorous male will chase a female to the point of exhaustion and even death. Give the fish a day to rest then start to feed them again, keep an eye on all the fish as some spawnings do cause small amounts of damage to the fish, this could be ripped fins or lost scales, make sure that the receptacles that the fish are kept in are kept clean as fungus and infections could take a hold on the fish as they have spent a lot of energy in the spawning process. Remember that cleanliness reduces the risk of disease.

Care of the Spawning

This is the critical part of the whole of your fish breeding year, unfertilized eggs can ruin a complete spawning, fungus (white fluffy strands) will grow on the unfertilized eggs, spreading fungus to the viable eggs, a small amount of Methylene Blue in the tank should inhibit the spread of fungus at this point. Increasing the temperature of the water to around 70 degrees will speed up the development of the spawning, aeration of the water should be increased as the temperature of the water is increased as the higher the water temperature the lower the dissolved oxygen content. If this method is followed it will mean that the viable eggs will hatch around the third day, you will notice the newly hatched fry clinging to the sides of the aquarium and on the mops and spawning media. After a period of two days the fry will become free swimming. Timing around this time is of the utmost importance.



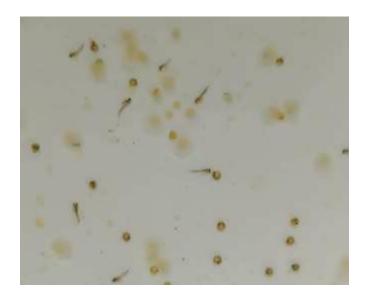
Developing eggs

Care of the Fry

The first feed for the newly hatched fry is normally Liquifry or newly hatched Brine Shrimp. You can purchase Liquifry from most aquarist stores, newly hatched Brine Shrimp (Artemia) will have to be planned by first acquiring an amount of the cysts (these are the eggs that you will need to hatch). You will need a water tight receptacle, (a round jar type of container is the best type as there are no dead areas of the jar compared to a square sweet type jar), an amount of pure salt, (not table salt as it has non caking agents added), an airline and a means of heating the water to around 70 degrees.

Following the instructions on the packaging of the Artemia will give the best results for the brand of cysts that you have purchased. I find what works for my water is as follows: I use one gallon round pickle jars, these are filled with tap water to within two inches of the top of the jar, into this I place eight level table spoons of pure salt, this is heated to 70 degrees with vigorous aeration, to this I add two teaspoons of Artemia Cysts. This generally hatches between 18 and 26 hours. To harvest the newly hatched shrimp turn off the aeration and leave the jar to stand for around five minutes the husks of the hatched eggs will float to the top of the jar and you will see the nauplli 'hopping' around the jar, use a piece of airline to syphon off the nauplli through a fine cloth (an old handkerchief is ideal). Rinse these through using a small amount of tank water and they are then ready to feed to your fry.

Timing your hatch of the Brine Shrimp to the time of the spawnings first feed is the key to successfully raising your fish.



Point of hatching (Note the infertile eggs)

Once the fry are free swimming it is time to start feeding them. The first feed should be of newly hatched Brine Shrimp or Liquifry. If planned properly food should be available for the fry at the first feeding. Feed sparingly at first as uneaten Brine Shrimp will die and easily pollute the water in the aquarium. At this point you will see the young fry more easily, they will show up more clearly as their bellies will show up full of orange shrimp. If you have an early spawning you should increase the day light hours by artificial means, extending the light in the fish house by an extra couple of hours in the morning and afternoon, the fry will need a feed every 3 - 4 hours for maximum growth. After a period of three to four weeks the fry will begin to look like 'mini adults', lacking the colour (this will come in time). Now the youngsters can be weaned onto more substantial food, ground down pellets or flakes pre-soaked, and sifted daphnia or Cyclops. Feeding small amounts of ground pellets or flake at regular times is essential to ensure the health of the entire hatch. This is a critical time for the youngsters, space becomes a premium, evenly spaced fish means that the youngsters will attain their maximum potential.



Close-up of newly hatched fry

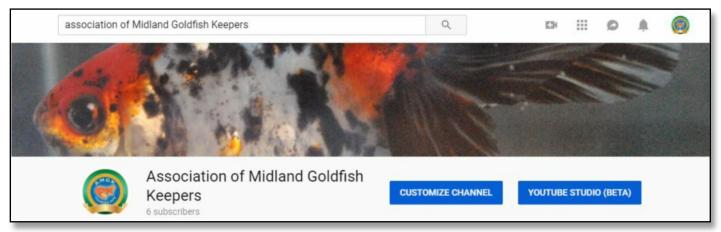
Culling

Culling is a necessary part of the breeding program, always dispose of the rejected fish in a humane way, The ideal method is to use oil of cloves diluted in water, have a receptacle with the water and clove oil mixture next to your sorting tank, simply place the rejected fish into the mixture, the fish will slowly and humanely fade away. At around three weeks the youngsters should be displaying the necessary traits of your chosen breed, any fish that are mis-shaped or twisted should be disposed of using the method described. If breeding 'twin tailed' fish, single tails and any with non split tails should also be disposed of. Calico fish are easily recognisable from a young age, in every spawning you will get a percentage of scaled and nacreous fish, the fish that are green are disposed of and also any 'pinks' fish that display no colouration should also be disposed of. Doing this can be very time consuming but the reward is tank space.

Following the first cull the fish should be evenly spaced across several aquariums, feeding is increased and higher protein feeds and plenty of live food should be offered. The young fish will develop well with plenty of space and food.

At around six weeks you should be able to further select the young fish for the traits of the given breed. Again dispose of any rejects using the above method, select for shape and finnage, also any runts (fish that never grow), pay close attention to the eyes of the fish, some are born with either just one eye or no eyes at all. Twin Anal fins in the relevant type are probably the hardest fins to inspect in young fish, many hours can be spent inspecting the fish from the side in a small aguarium to select this trait. If the fish only has a single anal fin put it to one side, it does not necessarily mean that this fish is not worthy of keeping, once the fish with twin anals have been selected go back to the fish that you have discarded with single anal fins, look very carefully at these fish, if one or two have outstanding finnage or shape it might be worthwhile keeping these particular fish to grow on as in my experience an outstanding fish with a single anal fin can be used for future breeding programs but never be tempted to enter it into a show as it will be disqualified. Colour will come with age, scaled fish start green over time they become darker and then turn to orange or red. Nacreous (Calico) fish are recognisable from an early age, the colour in these fish develops with age, the blue colouration is probably the last colour to fully develop.





DIARY DATES

FOR 2021

At the present time we cannot confirm any dates for this year's meetings.



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