



**KOI CLUB OF SAN DIEGO
NEWSLETTER©**

July 2021

Volume: 21 Issue 7

Po Box 22833

San Diego, CA 92192

www.koiclubofsandiego.org



General Meeting July 11 2021

Dick Long & Bonita Chamberlin

8312 Beaver Lake Drive

San Diego 92119

Please contact and confirm you will attend

Bring your own lunch and chairs

Social Time —12:30 pm

Meeting Starts —1:30 pm

8312 Beaver Lake Drive, San Diego 92119

Just off 125 and Navajo

619-742-1979

You will see Koi flags hanging from the tree in front.

You must bang the Gong to announce your arrival.

I have seating for 27 in our patio.

You may enter through the front door or on the east side of the house and see much of our filter system.

We will need one pop up.

We have tables.

We will supply water and some sodas.

We have turtles and Koi, one 3 feet long that will eat out of your hand and more.

OFFICERS

PRESIDENT: Matt Rhoades	(619)517-8270	president@koicsd.org
First VP-PROGRAM: Will Vukmanic	(619)322-6044	program@koicsd.org
Second VP-VENUE: Lenore Wade	(619) 442-0202	venue@koicsd.org
SECRETARY: Tamsie Pierce	(619) 427-9008	secretary@koicsd.org
TREASURER: Dr. Jessica Lynch	(619) 916-7120	treasurer@koicsd.org

PHONE

EMAIL

Koi Person of The Year 2020 Scotty Yee

APPOINTED OFFICERS

SHOW CHAIRMAN 2022: Matt Rhoades	(619)517-8270	show@koicsd.org
Webmaster-: Jerry Myers	(619)405-8908	webmaster@koicsd.org
Co-Webmasters-: Greg Ruth	(858) 395-7882	webmaster@koicsd.org
MEMBERSHIP: Greg Ruth	(858) 395-7882	membership@koicsd.org
PUBLICITY: POSITION OPEN		publicity@koicsd.org
NEWSLETTER: Jerry Myers	(619) 405-8908	newsletter@koicsd.org
AKCA REPRESENTATIVE: Scotty Yee	(714)943-3906	akcarep@koicsd.org
CLUB HISTORIAN: Dr. Galen Hansen	(619) 440-2035	historian@koicsd.org
PROPERTY MANAGER: Al Pierce	(619) 427-9008	property@koicsd.org
LIBRARIAN AND KOI HEALTH ADVISOR: Koi Jack Chapman	(619) 669-0490	health@koicsd.org
FINANCIAL REVIEW CHAIRMAN: POSITION OPEN		finance@koicsd.org
CORRESPONDENCE SECRETARY: Shirley Elswick	(619) 222-9825	correspondence@koicsd.org
JAPANESE FRIENDSHIP GARDEN LIAISON: Linda Pluth	(619) 200-4146	jfg@koicsd.org

MEMBERS AT LARGE

HELPING HANDS

WATER QUALITY: Jack Chapman	(619) 669-0490	waterquality@koicsd.org
KOI HEALTH ADVISOR: Jack Chapman	(619) 669-0490	health@koicsd.org
PROGRAM SUGGESTIONS: : Will Vukmanic	(619)322-6044	program@koicsd.org
TO HOST A MEETING: Lenore Wade	(619) 442-0202	venue@koicsd.org
TO SUBMIT AN ARTICLE: Linda Pluth	(619) 200-4146	input@koicsd.org

CALENDAR of EVENTS

Committee Meetings

STEERING COMMITTEE MEETING IS NOW LIVE

JULY 14th

Dennys

2691 Navajo Road

El Cajon CA 92020

On the corner of Navajo and Fletcher Parkway

7pm to 9pm

They have a room reserved for us

Come hungry and order dinner

Please remember that the Steering Committee Meetings are for any club member in good standing.

WELCOME NEW MEMBERS

**Afshin & Jamie Karimi
Kevin & Holly Whaley**

WELCOME RENEWING MEMBERS

**Keith & Tina Burgess
Gary Favron
Vince Hernandez & Lisa Grismer
Bill & Jeanette Newell
Colin & Lynda Patterson
Jain Malkin & Gary Watson
Deborah Szekely**



Find us on:
facebook®

**Inquiries concerning our Treasurer's report should be directed to:
treasurer@koicsd.org**

General Meetings

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General Meeting**

**Dick Long
&**

Bonita Chamberlin

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**KOI CLUB
OF
SAN DIEGO 33rd
ANNUAL KOI SHOW
PICTURES**

**BY
PHYLLIS SPOOR
aka SPARKLY HAT**

Click text

**KOI CLUB
OF
SAN DIEGO 33rd
ANNUAL KOI SHOW
PICTURES**

**BY
BILL NEWELL**

Click text

**NEW WEBSITE IS UP AND
RUNNING**

<http://www.koiclubofsandiego.org/>

Upcoming Events 2021



WE ARE LIVE!

**August General Meeting
Matt & Jill Rhoades**

**September General Meeting
Dean Strasser**

**October General Meeting
Kathy Stewart**

**November General Meeting
John & Nicki Schultz**

**December 12th 2021
Nancy & Frank Cannizzaro
11727 Invernes Drive
Tierrasanta CA**

The Original KCSO Koi Club Facebook page is up and running. Just enter Koi Club of San Diego in the friend search at the top of your Facebook page to friend it.



The President's Corner

July 2021

What seems a very long time ago, a Navy wife who had just undergone a duty station change commented how strange it was to look out the kitchen window of their mobile home and see a different landscape.

We're looking out the windows now with that same feeling. It's been almost a year and a half of masked superheroes. We've worn masks not to protect our identity, but to protect others. We've lived in isolation for the same reason. And we've now finally been able to peek out of that kitchen window at a similar, yet not entirely familiar world.

We seem to have weathered the upheavals of the past year(s) stumbled on focused on what we achieved in the past, what we value for the future. We have our ponds and our fish which will come to greet us as we sit out in the mornings (or evenings) with something to drink or munch and just enjoy the peace and calm our koi have almost always brought us. The peace and contentment we can pretend lies beyond our property line.

Koi have always been among the most peaceful of fish. Especially considering that unlike guppies and platys and gambusia they do not consume their free swimming young. Sleek, graceful, distinctive coloration and smart enough to recognize your approach to feed them. Well, maybe it's the sound of the patio door, or footsteps or position on the side of the pond, but still for you they will come swarming and splashing, and for the mailman not so much.

As we move forward - belatedly into a new year with some new officers and new (or too long delayed) events -think about how you can help our Koi Club. We've lost members - both to the pandemic and age and finances. We've lost income from the 2021 show. We've lost koi dealers from lockdowns and participation in that missing show.

Scotty Yee returned from a show in San Jose. Maybe the first in California. Possibly the first since 2020 in the US. We're at a point where we need to consider our 2022 show. When will it be? Where will it be? How will we as a club gather enough funding to put it on?

We've kept our faces turned forward. Toward that different but welcoming view out the window of a world new only in detail from what we have seen before. Time to step further out into the reality of it and make it familiar.

New club officers, yet the same reliable newsletter. New ponds to see and new members to greet, but knowledgeable friends we've missed for too many months.

See you at the meeting!
Al Pierce, President

CONGRATULATIONS TO OUR NEW ELECTED OFFICERS

President - Matt Rhoades
VP Venue - Lenore Wade
VP Program - Will Vukmanic
Treasurer - Jessica Lynch
Secretary - Tamsie Pierce

Steering Committee Meetings are now going live!!!

At the last general meeting we agreed to move the KCSD Steering Committee meeting to the 2nd Wednesday of the month.

In checking out locations suggested by the membership, Dennys on the corner of Navajo & Fletcher Parkway seems to be available. 2691 Navajo Road. El Cajon 92020

It is in a corner of a large shopping center and very visible.

They have an enclosed back room reserved for us from 7 PM to about 9 PM on Wednesday, July 14. There is a "charge" of \$75 for the use of the room which will be balanced out, I suspect by our orders of food and drinks.

Coming from Chula Vista we took 125 to Navajo, made a right (East) onto Navajo and Denny's was there in about a block.

Hope you can make it. With luck we can begin to set our course for the year.



50
golden
YEARS

Please join us in celebrating the retirement of
DR. ROBERT A. ADLER

JULY | 8 | 2021

6pm - 9pm

Dr. Adler's Office

920 Washington St. San Diego, CA 92103

RSVP to Karen at (619) 301-8535

Dr. "BOB" is very active in the club.

CONGRATULATIONS DR BOB

Notes from the Board

June

Koi Club of San Diego Steering Committee Meeting, Wednesday, June 2, 2021

Members Present:

Jessica Lynch
Will Vukmanic
Matt Rhoades
Al Pierce
Scotty Yee
Greg Ruth
Phyllis Spoor
Tamsie Pierce
Shirley Elswick
Tim Cooke

Meeting called to order at 7:00PM

Treasurer reported the balance, raising concerns for financing a show at Del Mar Fairgrounds in 2022.

Matt Rhoades gave a quick report on Japanese Friendship Garden trying to combat an aeromonas variant bacterial infection that seems to settle right behind the fish's eye and lateral line.

Matt Rhoades also reported that he has heard from Del Mar about the proposed 2022 show space. He expressed concerns at the proposed total of fees - many of the fees waived or comped in previous years are now back on the bill.

Jessica Lynch will be hosting the June general meeting, on June 13. July's meeting date still needs a host.

Will Vukmanic has agreed to be chairman of the Nomination Committee. The slate he has gathered is:

President - Matt Rhoades

VP Venue - Lenore Wade

VP Program - Will Vukmanic

Treasurer - Jessica Lynch

Secretary - Tamsie Pierce

The calendar date reserved for the Steering Committee - First Wednesday in each month - was discussed. No change to the bylaws is necessary - simply notification of the membership through the newsletter and announcement at the General meetings.

Scotty Yee gave us a brief recap of the NorCal (Fresno) koi show he attended, winning prizes, as usual. The show was notable for the number of large fish.

Meeting was adjourned at 7:33 PM





KHA KORNER

by

“KOI” Jack Chapman

“Beni” or “Hi” Ramblings for Kohaku

A year ago, I wrote on this topic and have updated (now a second time) and added a little and will remind you of this vital topic at this time. So my pond temp reached 74F yesterday (June 15) during warm spell. Time for me to start feeding 4 times a day and up the protein (for me 38% to 45%) and determine whatever it is you want to accomplish with your koi during this summer's growing season which has already begun when your pond hit about 67/68 F. WHAT – you say you have not set any goals or things you want to improve with your koi this year?? – SHAME ON YOU (LOL). Seriously – give it some thought – from status quo to better growth or improved color. Also, give improved water quality a thought as it is also important in achieving your other goals associated with the appearance of your total koi collection and the individual koi attributes. Lots of possible ideas, but thought I would ramble on (as I do) about the color **RED**. So why the color red - it was the first color observed on carp that created the idea of a better-looking fish. Articles that address the best overall appearance when viewing a collection of koi in a pond all agree that red is the primary or dominate color of choice. To quote Galen Hansen M.D., “The Granddaddy of all koi is the Kohaku.”; Bob Spindola “...the king of koi is the majestic Kohaku.”; Lucio Garcia “...undoubtedly *hi* is the most important marking in koi”; or (don't know who gets credit for) “The hobbyist journey begins with Kohaku and ends with Kohaku.” You get the picture, right? Koi farms in Japan have literally spent multiple generations (both human and koi) improving the color red and introducing new varieties of koi that include the color red through intensive selective breeding. There is just no way I can pay the proper amount of respect to the subject of “*beni*” or “*hi*” so I'm just going to scratch the surface in a few key areas and maybe give you some ideas you might want to explore in more detail on your own. I love this koi stuff and I can honestly tell you it's been the single most difficult subject for me to gain any real understanding of and I've got a long way to go with no honest expectation of ever having a full understanding of *beni* development. You know there are large sections of books and many articles that address this subject area with some general pearls of wisdom when it comes to buying and developing *beni* or *hi* in Kohaku. Each koi classification with *hi* has its own specific features. I would like to speak to just the Kohaku as we don't have the space nor the time to cover the many different types of *beni* or *hi* in today's koi. With only color in mind, today's *hi* in the Kohaku has been developed from one or more of the initial 5 Kohaku bloodlines. So, what can we say in general about the *Beni* of the Kohaku class?

There are only two types of *hi* – purple-based and orange-based. Purple-based is very appealing due to depth and density of the color, especially in young koi, but some judges think it can lack refinement and longevity. It is known to rapidly deteriorate in ponds with poor water quality and/or maintenance. This very bright *hi* (sometimes referred to as hard *hi*) can just disappear especially in the wrong water environment. I have a friend from another koi club who went to Japan and got a very beautiful 2 year old Kohaku of this *hi* type for 2K and two years later it did not have a single cell of red color. However, I don't think most of us (me included) would not have just loved to have this koi in our pond!!! The orange-based *hi* is said to require time and is not without its difficulties to mature and finish, but in the end is considered superior.

When buying or developing *hi* in a Kohaku you need to be observant of the individual scale characteristics. **BIG TIME!!** The best case scenario would be when it's hard to distinguish the individual red scales when looking at the *hi* plate, due to the depth of color with not over-the-top luster. You want to have what they (judges) refer to as youthful scales – as in continuous smooth surface since with age the scales will over time become concave in shape and not reflect light as well. Proper environment and nutrition can *prolong* the time a koi has youthful scales and this can make ALL the difference when seen in a larger and older koi. **BIG TIME (again)!** The bloodline history is vital as you want to know what you can expect of the *hi* in the future. Are the scales a darker red in the center of the individual scales throughout the koi's body and is the center *hi* color expected to enlarge and cover the entire scale or is it receding (not good). It is always great to have the opportunity to see older siblings of the same parents to judge what the future of your koi can possibly be.

When it comes to color the shade of red is not an important factor (in judging) but the **uniformity** of color is paramount!!! *Hi* on the head can be a little darker as its position is over bone and not in a scaled area – but you want the difference to be minimal. It is said that the *hi* develops first on the head and will mature towards the tail. It is also said “you buy the red and bet on the black” for Sanke and Showa. In other words, don’t expect new red to develop in an area where there is no visible evidence of any red. The *hi* needs to be homogeneous in nature. Side note: the *sumi* or black in Sanke and Showa is said to develop from the tail to the head. You want the *hi* to look like it is sitting on top of the koi and been painted on with it getting better each year to when it finishes and you think uniform shiny wet red and white paint look. The white (*shiro*) part of your Kohaku is very important and the subject befitting a separate article – but let it be said that in my opinion it’s the pearl porcelain look of the *shiro* in contrast to the wet red paint look of the red that makes a GRAND CHAMPION.

The *kiwa* is important and the back edge of the *hi* plate needs to be very clean as the top scale at the end is red over white (can be scalloped or a straight line). On the front *hi* plate edge the *sashi* can be one or two scales but you want the same number of scales as we now have a white scale over the first red scale. As the koi gets older and under your excellent care the total area contributed to *sashi* can tighten up (judge’s term) and become less in total area (a good thing).

Lastly, but of prime importance is the water quality and nutritional requirements to develop your prize Kohaku be it a \$10/\$100/\$1,000/\$10,000 or even a \$100,000 dollar Kohaku. Kohaku are said to do very well in the green waters of a Japanese mud pond so you can buy one and pay for it to be grown out in a mud pond for one to five or six years. Or you can buy one and grow it out in your mud pond or your koi pond. It has been reported that Kohaku raised in concrete ponds will finish earlier than in other types of ponds. I like to see my koi so I’ll pass on the pea green koi pond in my back yard as a way to improve the *hi* in my Kohaku. We are only doing the *hi* color part for this article so when it comes to nutrition to enhance the red color you can think processed color foods by any of the major brands of koi foods and they will work. And you can augment their diet with spirulina (algae– if you don’t have them swimming in it let them eat it – I use a sinking food from Tomigai and a floating food from Hikari as a good source of spirulina). Freeze dried shrimp are great and it’s what’s in the shell that you’re after for the red color enhancement. Red yams and red marigold flower pedals will enhance *hi* color. Want that wet paint look think possibly silkworm pupae, cabbage, Montmorillonite clay, kelp, squid and even Manda Nishiki. NOW – don’t forget, too much of a good thing can/will have adverse effects on your Kohaku and certain other koi classifications. **BIG TIME!** Your Kohaku and other koi can develop a pink cast of color in their *shiro* areas. Shiro Utsuri and Asagi are on the list for NO color food necessary - unless you want red spots and too much red respectfully. Been there and done that with Shiro Utsuri.

Water quality is important and constant good parameters are vital. The water for Southern California has attributes that are said to enhance the development of *sumi* (black) shimmies in Kohaku as well as other koi classifications.

Well, believe me when I say this only scratches the surface on the subject of buying and developing the *hi* in your Kohaku. If you made it to the end of this article I hope you have cause to think about what you would like to accomplish with your koi this summer and just maybe some food for thought in areas you might want to seek out more details. I like measuring my koi in early spring (think show time) and a picture for comparison at the end of our growing season and for us that can get to mid-November – record your feeding schedule and the results when comparing your pictures. This is also a good time to look at your pond collection as a whole and establish wanted additions and future improvements for next spring.

Special Note: Maybe the best article I’ve had the pleasure to read multiple times on the subject of *Beni* in koi was published in the 1999 JAN/FEB issue of Koi USA magazine written by Lucio Garcia, MSAE titled “Differences in the types of Hi.” Just a great review and wealth of info on the koi subject of *hi*.

Lastly I’ve often wondered when to use *beni* or *hi* when speaking or writing - So a Special Note for those of you that would like to be Japanese language correct when using the words *beni* and *hi* when written or spoken. With this virus stuff keeping most of us at home more over the last year, I’ve had the chance to do some koi reading and I would refer you to Koi USA July/August 2010 James Reilly article “Japanese and Koi Understanding” page 12 when he wrote “... ALL the world languages are either a ‘topic’ or a ‘subject’ language. And that is what my explanation of *beni* versus *hi* describes. That is, *hi* as subject (descriptive), and *beni* as a topic (judgmental). ... Japanese is the only spoken language that combines BOTH topic and subject orientation. Instead, it is the sentence that the word is used in that designates if it is being used as a topic or a subject. ... To westerners, who require the subject and topic nature of a word, simply try and appreciate that color is a subject (the *hi* is very bright) and discussion of color is a topic (this *beni* is coming along nicely – this is the error I most often make).” Now that I know the grammar rules - stupid me still finds it difficult for some sentences and I don’t want any calls or emails about my above article usage of the words except from the newsletter article editors LOL.

To all please stay safe and healthy.

r/koi jack

Schedule of General Meetings for 2021

Please check your local Covid guidelines for guidance and bring a mask just in case

Contact the host to confirm that you will be attending

Lunches are NOT provided so please pack your OWN lunch

General Meeting July 2021

Dick Long & Bonita Chamberlin

8312 Beaver Lake Drive, San Diego

Just off 125 and Navajo

619-742-1979

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July 11

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Just off 125 and Navajo

619-742-1979

August 8th 2021

Matt & Jill Rhoades 619-517-8270 Point Loma

September 12th 2021

Dean Strasser 619-300-2784 11479 Eucalyptus Hill Dr

October 10th 2021

Ernie & Kathy Stewart 858-231-0907 Poway

November 14th 2021

John & Nicki Schultz 619-379-5559 1954 Oak View, Alpine

December 12th 2021

Nancy & Frank Cannizzaro

11727 Invernes Drive

Tierrasanta CA

Address to follow as the meeting date nears.

June General Meeting at the home of Jessica Lynch



Once again Sparkly Hat has pulled thru with the pictures. If you want to see all of the pictures just click on the koi.

Sparkly Hat is Phyllis Spoor



K.O.I.™ News!

Koi Organisation International
Current Accurate Useful

July 2021

Online “Pondside” Series July 10, Noon EDT

Spike If you're not havin' FUN,
you're not doin' it right! **Cover**
Presenting

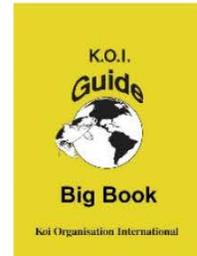
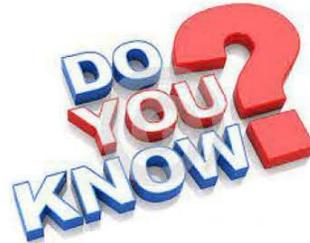


“Koi Pond-Water Conservation” Automated Water Reuse System FOR MEMBERS ONLY!

It's not too late – join K.O.I. TODAY!

More info on website:

<https://koiorganisationinternational.org/new-renewal-perks-2021>



HOW TO TREAT AN ULCER?

It's in your **GUIDE** - Page entitled: “Treating Ulcers” by Duncan Griffiths
This is what an Ulcer looks like:



Become a member – get the Guide!

<https://koiorganisationinternational.org/koi-memberships>

Congratulation Graduates!



New Certified Koi Keepers:

Lori Whitley – Medford, OR
Denise Winslow – Murray, UT
Jason Calvert – Danville, CA
Melinda Taylor – Southport, NC
Geri Edwards – Supply NC
Tom Booth – Surray, BC, Canada

The entire CKK Contact list, by state, can be found:
<https://koiorganisationinternational.org/ckk-contact-list>



TIP OF THE MONTH

Water Testing

4 Required and Why:

1 & 2 - Ammonia and Nitrite – tells you if your filter is working

3 - KH – (a.k.a. carbonate hardness, total alkalinity) tells you if there are enough carbonates to keep the pond stable and prevent a pH crash

4 - pH – tells you if the pond is heading for a pH crash



Puller at the Fuller 3.0

Hi everyone Latamer P Koi here.

On Friday the 25th, Vagabond along with a number of club members were at the Fullers pond to remove the spawn from last year.

I am calling this 3.0 because this is the third time I have removed spawn from their pond. It seems every time they drain and clean it the fish get all excited and spawn! GO figure!

This year I helped them to clean it and made some suggestions to Thom as to what we could do so this does not happen again.

We invited club members to the event to help raise funds for Vagabond. Funding has been a sketchy thing with Covid, but we will get by to the end of the year thanks to several club members and their willingness to help out.

We charged on the average of \$10.00 per small koi or 3 for \$25.00. Some of the larger ones may have gone for more.

All in all I would say, while it was a long day it was a good day.

I would like to thank the following club members for their help at this event.

John Svelan, Jamie Kanes, Ben Adams and Catherine Sass. I would also like to thank Thom and Lynne Fuller for the opportunity as well as all the club members who showed up and took some nice fish home.

THANK YOU ALL SO MUCH

Latamer P Koi (aka Jerry)

For all the photos taken by Phyllis Spoor click the images below (parts 1-3)



It's not a job, it's an adventure every time.



Fuller pond pull 3.0





Note from Editor. I was sitting here trying to figure out who I missed in thanking for their help at the Fullers. It was really bugging me and I just couldn't figure it out and then the light went on-PHYLLIS! How could I forget Phyllis!

Phyllis **always** shows up with her sparkly hat, camera, Coffee, creamer and COOKIES.

A very special thanks to Phyllis for her continued support of the club, the rescue and for all the great pictures. (lets not forget the cookies)

THANKS PHYLLIS

Koi Spawning Ed Broomfield

Spring is in the air, and for our Koi, so is love. Spawning season is upon us and if you are the type that enjoys observing an ecosystem it is an interesting period. However, a successful spawning will pose a challenge to our closed ecosystem ponds. But more on that later, let us explore what happens during a spawn.

Spring to mid-summer is when our Koi spawn. Annual spawning is triggered by environmental conditions, including rising water temperatures, increased barometric pressures, and prolonged daylight hours. The optimal water temperature for spawning is 68°F (20°C). Reaching these conditions will largely depend upon what region your located. Warmer climates will have favorable conditions sooner than cooler ones. But when it comes down to it Koi will spawn when they are good and ready to. I have one Koi (*Big Girl*) who started to display spawning behavior at 62°F (16°C) and spawned at 64°F (17°C). This seems to defy the research. However, it did correlate with a sudden rise in temperature. As pond water temperature rose 2°F in 8-days. The other Koi have yet to show signs of spawning.

Pond vegetation plays a critical role in carp reproduction. It provides a place for the eggs to adhere to and grow. In the wild, carp spawn in grassy lily pad areas approximately 2 - 3 feet deep. In our ponds the Koi will gravitate toward shallow areas with lily pads and water plants.

It is helpful to understand some carp physiology. Carp are oviparous, meaning that, instead of live birth, they lay eggs. Koi fecundity (*Ability to produce eggs.*) is body size dependent. Koi produce up to 500,000 eggs per spawning. The reproductive potential of a female is remarkable because their fecundity increases with age. Within the female, it takes a year (in the USA) for eggs to fully develop, eggs laid this season were formed after last year's spawn. This means the number of eggs spawned this season is partially dependent on environmental conditions after last years spawn. Prior to spawning females will appear swollen around the abdominal area. This is a sign that the eggs have reached the appropriate size for fertilization. Eggs are laid unfertilized, with fertilization occurring when males release their sperm onto the eggs. Koi are broadcast spawners, meaning the milt from several males can fertilize the eggs of several females. Carp are capable of spawning throughout their adult life. Sexual maturity is size dependent with males becoming mature at 7" (17.5 cm) and 8.5" (17.5 cm) for females. As spawning approaches male koi will appear slim and may display enlarged pectoral fins.

Koi will breed as a school or gasp. During spawning male koi become extremely aggressive pursuing females around the pond, smashing into them repeatedly. This behavior is designed to expel the eggs from the female's body. Surface flashing may also occur. In our pond, it sounds like someone is throwing boulders in the water. After spawning adult fish will eat many of the eggs, however, if precautions are not taken by

the Koi keeper. The eggs that remain usually hatch in four to five days, but three-day hatching is not uncommon.

Spawning presents risk to the fish, especially the females. Aggressive male behavior during spawning can cause injury. Loss of scales on both females and males is common. While most scales grow back relatively quickly, there can be some permanent scale damage. Missing scales causes fish to be much more susceptible to parasites and disease. While the Koi are healing consider adding a polymer based slim coat protectant to the pond. There is only one product like this. Do not under any circumstances add a slim coat protectant which irritates the Koi's skin. This stresses the Koi and only makes them more susceptible to infection.

Young hatchlings are known as fry. Unless fry can find a suitable place to hide, they become food for larger fish. Suitable hiding places include rocks, crevices, vegetation, and the piping and filtration. If these conditions are present, some fry may survive to maturity.

If your desire is to grow these hatchlings, fry will do best in an unfiltered, untreated outdoor pond. While many koi pond enthusiasts prefer clear, pristine water, this environment does not provide ample food for the young fish. The microscopic organisms necessary to feed these developing fish are destroyed by water treatments and filtration. Filtration systems also present the risk of filtering the eggs and young fry, along with other debris, destroying them in the process.

Now more on fish husbandry. For the eggs which survive hatching, you will have to do something with these rapidly growing Koi. If they grow to maturity, you will have a very over stocked pond. You will need to get rid of the excess Koi. For those thinking about giving them away, you will quickly find out that nobody want your baby fish. Releasing them into the wild is not only illegal it is bad environmental stewardship.

Unless you are trying to breed Koi, the best solution to the fry problem is to not let the eggs hatch in the first place. This is accomplished by treating your pond with potassium permanganate (PP) dosed at 1 PPM. This prevents the eggs from hatching and the adult Koi can still eat the eggs. Additionally, PP dosed at 1 PPM will not harm the adult Koi and will cleanup some of the dissolved organic compounds (DOC) in the pond. If your pond has a lot of DOC's consider dosing 1 PPM for 3-consecutive days. You must treat the entire pond including filtration. Eggs will attach anywhere and everywhere including pipes and bioconverters.

Treating the filtration will cause some dieback of the oxidizing bacteria nitrosomonas and nitrospira which are essential in converting ammonia to nitrate. After treatment, to keep the Koi safe, monitor ammonia levels and use ammonia detoxifier until the bioconverter colonies repopulate. It is a good idea to stop feeding for two-weeks after treatment. Do not worry - the Koi will have plenty of eggs to feed on.

Use caution when using PP. Always use personnel protective equipment. Have the necessary measuring equipment because a 1 PPM dose can be exceedingly small amount. Triple check your math. **Miscalculating your dosage will have devastating effects.** I use a preprinted sheet with all the dosing levels calculated so that I do not have to rely on my bad math skills. Finally, have plenty of hydrogen peroxide available to stop a runaway reaction. By a runaway reaction I mean when you suddenly realize you accidentally dosed the pond a 10 PPM instead of 1 PPM and your Koi are about to die.

In conclusion, spawning is an annual event and necessary for female Koi health. If you can catch it happening it is interesting to watch. After a spawn, monitor your fish for injury and treat accordingly. Unless you want to deal with a bunch of young Koi treat the pond with PP. Finally, this is supposed to be fun so smile more and worry less.

While researching this article, I discovered, in the Koi hobby world, there is little verifiable information on carp spawning. So, with the help of Google Research, I spend a couple of days reading papers on the subject. If you want to go down that rabbit hole, here are a few of the papers I sourced.

- Tessema, A., Getahun, A., Mengistou, S. et al. Reproductive biology of common carp Fish Aquatic Sci 23, 16 (2020).
- Bagenal TB, Braum E. Methods for assessment of fish production in freshwaters. London: Blackwell Scientific Publications; 1987.
- Bagenal TB, Tesch FW. Age and growth. In: Methods for assessment of fish production in freshwaters
- Hailu M. Reproductive aspects of common carp
- Aera NC, Migiro EK, Yasindi A, Outa N. Length-weight relationship and condition factor of common carp,

Thank you Ed for the wonderful information

What does a spawn look like? Click the link. Just a quick video

<https://www.youtube.com/watch?v=oVwfgZFhMyU>

Got foam, fishy smell and a million little balls sticking to everything?

Does your skimmer look like a bucket of cheap caviar?

Chances are your koi spawned and they didn't invite you!

Editors Note

With the recent problems in ponds lately I found this on line. I received permission to reprint it in our Newsletter from Michigan Koi.

The Koi Club of San Diego as a club is not expressing their opinion on using salt or not using salt. This article is just for information only. You as the pond owner, after doing some research should decide for yourself

Salinity in Ponds

FACT: Salt Kills Freshwater Koi and Shuts Down Their Kidneys.

Some disturbing news has been going around that states salt levels above 0.3% are going to cure your Koi if they are all broken out in sores. This is incorrect because salt works by using osmotic pressure and therefore will not kill bacteria that are in the Koi's bloodstream. These bacteria cause diseases.

Salt will also damage your biofilter and cause high ammonia levels.

We have received calls from Koi hobbyists that have ruined their pond, and/or killed their Koi due to over salting. Unfortunately, the salt takes a while (a month to three months) to kill the Koi. Most Koi keepers do not understand these points.

There is a very high success rate with healing and treatment techniques. If you want to save your Koi, please take some time to read and use the proper Koi and Water treatments.

Salting Your Koi? Important information that you need to know:

We have been studying medications and raising Koi for 30 years now, and in the last couple of years... hobbyists started using salt by the ton on their Koi as some kind of new "wonder drug". We would like to explain what happens to freshwater fishes when exposed to high sodium levels over periods of time.

Many Koi keepers that we talk to, tend to think that their Koi have dropsy because the Koi are swollen, they stop eating, and eventually start breaking down with many different secondary infections, due to the high-stress levels that are introduced by using salt.

Some of these infections include:

1. Hemorrhagic Septicemia (red streaks in body and/or fins).
2. Saprolegnia Fungus (white cottony puffs on skin, fins or tail).
3. Pseudomonas Bacteria (Fin and Tail Rot).
4. Aeromonas Bacteria (Sores on the body with ulcerations).
5. Heavy slime covering the fish. The fish produce heavy slime as a defense against the high salt levels.
6. Extreme swelling similar to dropsy.
7. High mortalities, sudden death, and complete tank or pond wipe-outs.

Salt at high levels will also destroy the nitrifying bacteria in your filter, that keeps your tank or pond cycled and ammonia free. So, if you are using salt and notice abnormally high ammonia or nitrite levels in your water... this is the cause.

Osmotic Pressure on Fish:

The use of salt is being promoted mainly by hobbyists in chat rooms that have little or no understanding of fish pathology or osmotic pressure on fish and how this works. This is a case of hobbyists, consulting to hobbyists can be detrimental to the health of your fish.

In the ocean, fish will swim into freshwater to rid themselves of parasites, and then swim back into the ocean. The fish do this only for a few minutes and then return to their natural environment. The reason that the parasites fall off is due to increased osmotic pressure. When you put a marine fish into freshwater, it is like putting a heavy weight on top of the fish. So, this does not mean that this will work for freshwater fish the same way. Salt can be used for external parasites if used properly. Make a 0.3% salt dip and leave the fish in the solution for 3-5 minutes. Return the fish to fresh water. This is stressful for the fish, so care should be taken when using this approach. It is suggested that if you have parasites, to treat the whole pond with the proper parasite treatment. This salt dip will not cure many bacterial diseases that fish carry in their bloodstream, and is no cure-all for fish diseases.

Continued next page

Testing The Salt Theory:

A good way to test the salt theory would be to set up 2 tanks.

- 1.) Salt one tank 1 according to the instructions that were given to you and use a dechlorinator, if you are using tap water.
- 2.) In tank 2, use a nitrifying bacteria (like Pond Support), and a good dechlorinator (like DeChlor & More Dry Concentrate) for your tap water. Do not add any salt to this tank.
- 3.) Go down to your local fish store and purchase a dozen fish of your choice. Tell the fish collector to separate them and put 6 fish in each bag.
- 4.) Get yourself a small note pad, so you can keep a log of events on both tanks. This experiment will take some time (around 2-3 months) to complete.

So, now let's look at some facts:

Salt is anti-bacterial and anti-viral. This does not mean that it is good for freshwater Koi. You could pour a bottle of BLEACH into your pond, and I could guarantee that it will kill any living pathogen in there, but it would also kill all of your Koi. Get the point?

Salt is toxic to your Koi if used at high levels for long periods of time. It will shut down their kidneys, and that is why so many people have Koi with "pop-eye" or Koi that have the same symptoms as Dropsy. Salt is toxic to humans if ingested in quantity, and high salt levels are toxic to animals. Use some common sense with the information we have provided for you, and remember that if salt was such a great treatment option; we would not need any of the Koi and water treatments.

"These salt treatments are nothing but the Fleecing you with false hope." Would you rather buy a small bottle of medicine that really works, or lose a whole pond full of Koi from overdosing with salt?

Michigan Koi will not put salt in the pond but will use it in our hospital and quarantine facility. We believe the problem with salt year round is you create salt resistant parasites! William W. Risher

When you do use salt, know the correct dosage.

Use this salt calculator: <https://michigankoi.com/Pond-Salinity-Calculator.html>

Here are a few links to get you started

Personally I use salt in my rescue ponds as needed NOT for parasites, as there are better ways to treat them, but for helping them heal a wound or sore. I also use it to counteract the negative effect of high nitrite when I have overloaded the pond from a rescue just to be safe and I do water changes and monitor daily

<https://www.kodamakoifarm.com/benefits-salt-koi-pond-why-should-use-it/>

<https://www.thepondguy.com/product/learning-center-wg-pond-salt-for-pond-health/learning-center-wg-natural-water-treatments>

<https://www.pondexperts.ca/pond-advice-tips/salt-in-the-pond/>

Non-iodized **salt**, Sodium Chloride (NaCl) is the best type of **salt** to use in **ponds** with **koi** and goldfish. It should have no additives, which could adversely affect your fish. Many **water softener salts** contains YPS (Yellow Prussiate of Soda) which acts as a anti-caking agent. YPS is hazardous to fish.

Speed of killers

- 1 White Spot - ick
- 2 Costia
- 3 Chilodonella
- 4 Gill flukes
- 5 Trichodina (if numerous)
- 6 Skin Fluke
- 7 Lice
- 8 Anchor Worms
- 9 Leeches

Oodinium
visible at 200X

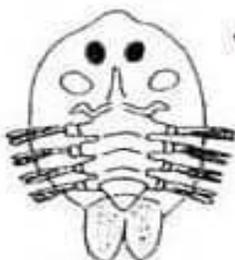


Ick (white spot)
visible at 200x

**Gyrodactylus
Skin Fluke**
visible at 100x



**Argulus
Louse**
visible



APPENDIX FIVE Parasites of the Skin – Stylised Diagrams

commas -turn
inside out

Costia
visible at 300x
- 400x



Chilodonella
visible at 200X
Looks like lemons



Leech
visible

Trichodina
visible at 200x
flying
saucers



**Dactylogyrus
Gill Flukes**
visible at 100x



**Lernaea
Anchorworm**
visible



Adapted from Scott P.W. (1985) in *Manual of Exotic Pets Revised Edition*
(Edited by J.E. Cooper, M.F. Hutchison, O.F. Jackson, R.J. Maurice) B.S.A.V.A. Publications.

This is a link to Mankysanke article on carp pox as well as the home page

http://www.mankysanke.co.uk/html/carp_pox.html

https://www.mankysanke.co.uk/html/good_water_guide_pt_1.html

<http://www.mankysanke.co.uk/index.html>

There is a plethora of great information here. (How's that for a \$5.00 word eh?)

LINKS

Some really *crappy* links, Get it?

These links contain information relating to Koi poop. As with any information on the web be careful on what you take as truth. The KCSD absolves itself of any misinformation on these sites. Remember Knowledge IS power

<https://www.kodamakoifarm.com/koi-sick-health-diagnosis-symptoms-diseases/#:~:text=Feces%2FWaste,your%20koi%20might%20be%20eating.>

<https://allaboutkoi.us/2016/04/22/koi-feces-diagnosis/>

<https://www.koiphen.com/forums/showthread.php?115076-Lets-talk-Koi-poop>

This BTW is a good site to bookmark and join

<https://cafishvet.com/fish-health-disease/stringy-white-fish-poop/>

This site is Dr. Jessie Sanders DVM up north. Check out her site and subscribe to her newsletter. Her specialty is fish

<https://drjohnson.com/changes-in-stool-quality-in-koi-goldfish-and-pondfish/>

This is Dr. Erik Johnson DVM site. He is well know in the fish community and has writen many books on fish and their health.

<https://koi-care.com/koi-diseases-treatments/>



AKCA

[Click to be directed to website](#)

Sure, you know everything there is to know about your pond and koi.

That is right up to the second it all goes south!

Parasites, water parameters, pond or filter issues, WTF (udge) is wrong here?

Ohhh I'll just call someone! Tic toc time is wasting. Fish need help!

Sound familiar? Welllllll take the course and learn what you really know!

John and I, Jerry, have both taken the course and learned quite a bit about our pond and fish.

You owe it to yourself and you koi to learn.

Latamer P Koi



[Click image to view site](#)

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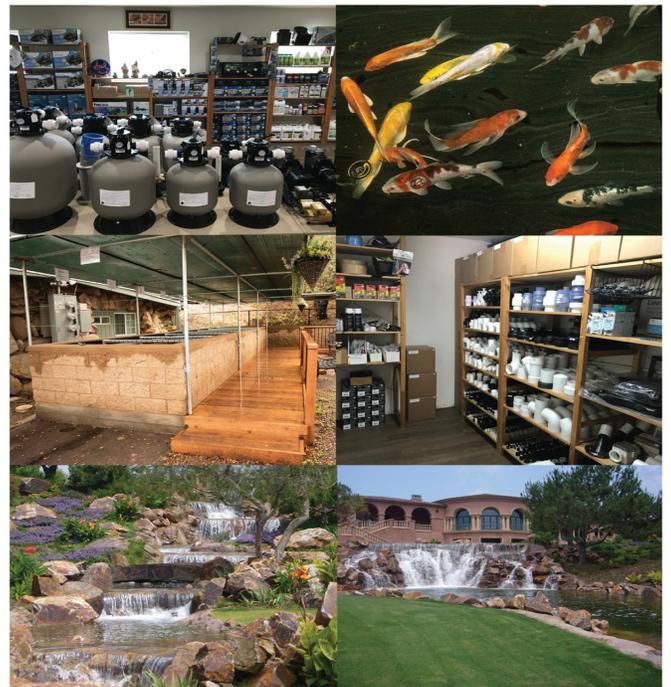
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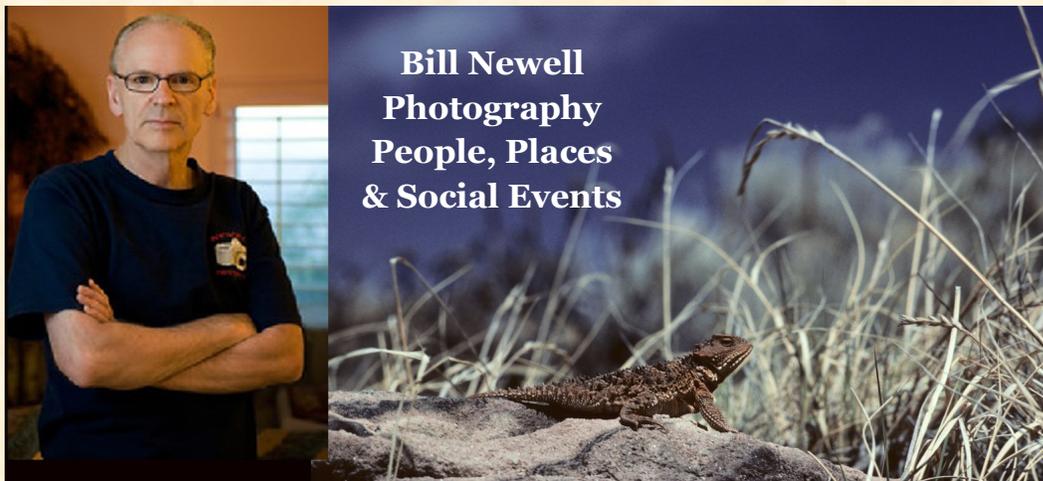
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 (excluding liner)

I have decided to link both the SmugMug accounts of Bill Newell & Phyllis Spoor to the newsletter and the website. Both of our club members take fantastic pictures of everything you can think of all over the world. For Bill's SmugMug click his picture. For Phyllis click her picture.



On behalf of the Koi Club of San Diego I want to thank both of **these** extraordinary photographers for their continued effort to capture the spirit of club members during our gatherings. From the Ponder Profiles, to monthly meetings, **Koi Rescues** and special events, **Phyllis Spoor and Bill Newell are always ready at a moments notice and we thank you!**



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Sekiguchi:

Nijikawa was mixed at all ponds. Great Growth. Need more Research on how to handle. "I believe Nijikawa has Tremendous Potential"

Isa:

Nijikawa was used with 50% ratio, but finished in two weeks. Result is inconclusive. But "I think that Nijikawa maybe the ONLY Good Koi Food Made Outside of Japan"

Hasegawa:

Nijikawa reminds me the great quality koi feed made in Japan 30 years ago! Only 15% used in Sansai pond, it completely changed the koi this year!

Marusaka:

Nijikawa was used at all ponds with different mixing ratio. Great Growth and Great Conditions!

Ozumi Ikarashi:

Nijikawa was used at all ponds with different mixing ratio. Great Improvement on Conformation. Koi are Healthy and Active!

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