



SAKA News



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April 2008

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Southern Arizona Koi Association Business

SAKA AIMS

- a) Organized by people with the interest of raising and improving the quality of Nishiki Koi, and its culture
- b) Through Nishiki Koi, promote better international and community relations and for public welfare and the better understanding of brother-hood among members through a common interest.
- c) To improve the technology of raising and keeping koi.
- d) To promote Nishiki Koi.

BUSINESS

- a) To encourage the raising and better development of koi through public and private exhibition.
- b) We will have monthly study discussions and make field trips to various members' ponds.
- c) To carry out necessary business functions of the Club.

CLUB MEMBERSHIP

- a) A qualified member must be interested in pond culture.
- b) Persons wishing to become a member must be first introduced by another member in good standing and have approval of the Officers - Dues are payable immediately.
- c) Membership will be terminated by the Officers if a member is found guilty of negligence of his duty, is against the purposes of the southern Arizona Koi Association, and/or who disgraces or insults the Club.



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SAKA Club Officers

President	Bob Panter sakabob@yahoo.com (520) 747-7278
Vice President	David Young koiman@mindspring.com (520) 682-7697
Secretary	Faye Hall (520) 297-1253
Treasurer	Dan and Martha Cover mardan79@msn.com (520) 297-4071

Committees/Points of Contact

2008 Pond Tour	Debbie Shaw castlerockkings@cox.net (520) 275-4510
29th Koi Show Chairperson(s)	Bob Panter dpanteraz@cox.net (520) 747-7278
AKCA Representative	Debby Young debbyt@akca.org (520) 682-7697
Newsletter Editor	Laurel Nason laurelnason@yahoo.com (520) 977-2353
Koi Health Advisor	Noel Shaw koidoc@noelshawdc.com (520) 400-0335
Membership Chairperson	Faye Hall (520) 297-1253
Raffle Chairpersons	Wanda & Bruce Triebel wandakarlik@aol.com (520) 572-0060

Editor's Note: Articles published herein are intended for the enjoyment of our club members and come from a variety of sources. The articles are not intended to replace veterinary advice. Pond owners, and not the club, are responsible for the health of their koi, water changes, what to do, and how to treat their pond. Reasonable effort is made to review these articles for accuracy before including them in the newsletter.



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President's Corner

Is winter gone? I think so. Ninety degrees is just upon us. So!! How's that koi pond of yours doing? Are your koi happy? What about you? This is the time of year when your fish are coming out of hibernation. I would say they are hungry. So what are you waiting for, feed them! Check your water and your fish. Do preventative maintenance, your koi will love you for it.

Pond tour 2008 is upon us. This should be another wonderful weekend for all. Please help out on the tour when you can. Your time and help is what makes our pond tour weekend the success it is. Keep up the good work.

Spawning season is just around the corner. Are you interested in breeding koi? Would you like to try someday? Just come to a meeting and talk to some of our koi keepers. I am sure they would be eager to share their knowledge with you. Don't be shy, give it a try. Koi keeping is the greatest.

For the love of koi,

BOB PANTER

Bob Panter, President S.A.K.A.

Club Announcements

Welcome New or Returning Members:

No new members this month

Announcements:

Hardcopy newsletters are presently provided to all members. All members receive the newsletter both in hardcopy and some, electronically. If members would rather receive their newsletters electronically and opt out of receiving the newsletter in hardcopy form, please contact Laurel Nason at laurelnason@yahoo.com. Some members have web providers that won't accept large files. To access the map to our hosting member's house, please go to our website .

Membership dues for 2008 were due on March 1st. Membership form is included in the newsletter (please mail to our new treasurers) and available on our website.

Club Meetings

Hosting Meetings: For those wishing to host an upcoming business/education meeting, the club will reimburse the host up to \$50 (with receipts) toward food/beverage for the meeting. In addition, each host gets one entry for our host raffle prize at the Christmas party (a \$500 cash award). **We still need hosts for meetings in 2008. We would like to see your pond!** Contact Laurel Nason (laurelnason@yahoo.com or 520-977-2353) if interested in hosting a meeting.

SAKA 10% Discount

With your SAKA Membership Card at:

Boyd Equipment Center

3625 S Country Club Road
Tucson, Az
(520) 792-2244 or
1 (800) 844-2244

Mountain View Koi Fish & Aquatic Plants

3828 E. Keeling Road
Hereford, Az 85615
(520) 378-3710



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Oasis Tropical Fish

3865 N. Oracle
Tucson, Az
(520) 408-9700

March's Business Meeting Minutes

Date & Location: March 30th at Casey and Smokey's Home

Call to Order: Meeting called to order by Bob Panter at 2:36 pm

Feb Minutes: Motion made to accept and second the February Minutes. Motion passed.

Treasurer's Report: Current balance: \$17,249.00

Membership: Not Available

Correspondence: Newsletter from the Tucson Watergardeners. Received email regarding club purchasing OSI Koi Food. Correspondence from Kloubec Koi Farm indicating they will work with our club on raffle/fundraisers.

AKCA: Burt Ballou acknowledged receiving the Johnson's for Koi Person(s) of the Year

2008 Pond Tour: Debbie Shaw reports that she has 14 ponds set up for tour with 6 ponds on Sat (NE side of town), 3 ponds Sat Night (W/NW) and 5 for Sunday in Green Valley/Vail area. Tickets are \$5 ea ages 12 and up and can be purchased from 9 different vendors. A raffle prize will be available. Need volunteers to assist homeowners during the tour. Posters available for distribution.

2008 Koi Show: Dates and site for the 2008 pond tour have been confirmed. Location is the same as last year. Judges are being solicited for the show.

Scholarship Committee: Money is being set aside for one member to receive reimbursement for expenses to attend the AKCA seminar (up to \$1500). Scholarship application needs to be received by April 15th to be eligible. Winner will be chosen from random drawing of all entries. The winner will not be eligible for another 5 yrs. Other money available to seminar attendees for the registration enrollment only. Applicants send their scholarship application to Erin Riley at elriley@aol.com

Equipment Manager/Committee: The SAKA Trailer has been delivered to Doug Wahl's. Bob Panter is looking for a few club volunteers for a weekend in April/May to help Doug build a covered area for our vehicles and travel trailers.

Old Business: Bob Panter discussed progress with the paperwork for non-profit status including the benefits of allowing the club to own our equipment, free air time for advertising and protect club officers from liability. Status will require a tax report and meeting sign-in list. Nathan Novak of Canyon Pondscapes is graciously allowing the club a corner of his table at the Home Show April 11-13th for the club to provide some club info



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for the public. Thanks Nathan! The Tucson Girl's Chorus extended another thank you to the club for our donation.

New Business: Demographics sells custom 3' vinyl logos at approx \$90 each with a do-it-yourself installation for consideration of our club trailer. Three logos would be needed. Casey has some water plants available to club members including celery, cannas, watercress and cattails. The Tucson Watergardener's are having their plant sale on Sunday May 4th from 8am – 12 noon at SW corner of Reid Park the same day as our pond tour.

Adjournment: The meeting adjourned at 3:28pm.

Education: Tim and Kim Moore discussed their approx. 4000 gal pond construction and KHA Health Advisor, Noel discussed Aeromonas bacteria and demonstrated dipping one of the Casey's koi with tri-cide neo.

AKCA Seminar – Jacksonville Florida (June 26th-29th):

The upcoming June 27th AKCA Seminar will be held in Jacksonville. Please make your reservations soon. For those who have never attended a seminar previously, the club has some scholarship money available to help defray some of the costs for SAKA members. Apply before March 25th! Some of the tentative subjects to be covered include, Forum of Domestic Breeders, Koi Diseases, parasites, diagnosis & treatments, KHV update, new koi varieties, DIY quarantine tanks and filtration, 2007 ZNA all Japan Koi Show and Fall Koi harvest, judging with AKCA judges, pond 101- building a koi pond that won't break the bank, tropical water lilies, Internet Information Forum, etc.

For more information, contact www.akca.org or davisbrown1@juno.com.

Featured Articles

Water Hardness

(reprinted from the San Francisco Bay Area Club Newsletter Mar/Apr 2007 Volume 13 issue 2)

Water hardness is spoken of often in the sense of how important it is to the health of our Koi. It is understood that our finny friend prefer harder water for their health and in fact our general problem is water 'softness' rather than hardness.

But what does hardness mean? Hardness come in two types General hardness (gh), which describes the mineral content in the water, primarily Calcium and Magnesium. This term is also known as permanent hardness in other applications, but it will not be used again. Also, there is a term used; degrees of hardness; that will also not be used, as it is used primarily in scientific applications, not aquaculture.

These elements, along with others, such as Iron, Manganese, Copper, etc. are present in the water and are the element that cause the staining and scaling we see as deposits on our plumbing and pond sides.

The second type of hardness is carbonate hardness (kh) and is more in line with what we have known as alkalinity in the water. This hardness provide the buffering capacity to prevent large pH swings (discussed later in the article).

There is also a measure of Total Hardness (th) which is the addition of the gh and kh. This measure is not particularly instructive as the hobbyist really needs to know individually the dissolved minerals and the carbonate hardness.

For us in the hobby, the carbonate hardness is the most important measure. The amount of carbonate in the water will help manage the pH in the water and prevent large swings in pH which can ultimately sicken and kill fish.

The constant nitrification of the pond, through the normal life cycle of the fish continually softens the water by removing the carbonate content in the water. This is stemmed through water changes, and addition of sodium bicarbonate.



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Respiration of fish, photosynthesis of water plants and the nitrification cycle the removes ammonia and nitrites from the water all lower the buffering capacity of the water by causing the carbonate ions in the water to react and release CO₂ and freeing Hydrogen ions into the water. The Hydrogen then reacts with the carbonate again and acidify the water. Once the Carbonate ions are used up, its ability to buffer pH is also removed, causing pH "crashes" that we hear of, primarily in the summer, when biological activity is at its highest.

What can the hobbyist do to prevent this? Primarily, the best you can do is to know what the level of carbonate hardness is in your pond.

Koi prefer moderately hard water, 100 to 300 milligrams per liter. There are test kits that will test for this condition. You should at least once per month to be certain that the buffering capacity is present.

You also should know the pH of the pond as well. If you have hard water and the pH is higher than 8.3, the carbonate ions will bond with the calcium ions in the water (since there is little free hydrogen in the water) and you will create scale on your system, usually calcium or magnesium carbonate.. This can be removed mechanically by scraping it or chemically by reducing the pH under 8.3. Mechanical scraping is preferred as tinkering with pH can be fatal to your fish.

General hardness is also important but less so. Calcium is required in the water to assist with the formation of bones. Trace minerals are also important to fish health. While most water supplies have adequate amount of these elements in the water supply. If your testing shows low gh levels, you can add crushed oyster shell or other calcium source to the filter which will cause the gh level to rise. Again choose carefully here as the balance of pH, gh, and kh will need to be monitored as you make changes.

The best solution to all of this, as you probably know, is frequent water changes, backwashing of the primarily filter, and periodic monitoring of water quality. Koi are fairly hardy fish and can take some pretty wide ranges of water quality. To this point, we have discussed pH, gh, and kh. The ranges below are the generally agreed upon levels.

pH

6.8 to 8.6

Koi will do well in this range but prefer pH levels in the 7.6 target.

gh

Not important unless the calcium level approaches non-measurable. Trace elements are important and many times are provided by the water and food supply

kh

100-300 parts per million is the preferred range. Lower than that will risk pH swings, higher will potentially cause scaling on your plumbing and pond.



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Kawarigoi Korner



Since last newsletter went to print, Area pond owners have reported spawn activity as early as March 21st. With this week's warmer nights and hot days, it's likely by our May 3rd Pond Tour that spawning season will be over here in Tucson. In the event pond owners who want to try rearing baby fry, I've reprinted this article from last year's newsletter:

Rearing baby fry for the hobbyist – what do I feed them?

Article written by Laurel Nason

Reprinted from April 2007 SAKA newsletter

Spring time in Tucson is the time of year when our koi spawn. How do you know when your fish are ready to spawn? The koi begin to "school". This behavior can be observed in that the koi break up into groups with several males tending to chase the female (nose to belly) with a purpose (ie aggressive-like "fighting") rather than normal swimming patterns, or the fish tend to hover near the surface of the water or in the shallow end of the pond or near the water plants. Use safe spawning material to discourage the koi from pushing each other against the sides of the pond and netting should be anchored to minimize the possibility of fish loss through jumping. This chasing behavior is rather sporadic but usually occurs in the early morning hours (5am- noon).

As mentioned in last month's newsletter, there is an extremely pungent odor (like dead fish) and cloudy water after the spawn and not all females/males spawn at the same time but generally within a few days this process completes. The eggs are visible, yet small and look like tapioca but appear more greenish-yellow than white. Some hobbyists let nature provide the means for natural selection – ie the eggs remain in the pond and either get eaten, hatch and get eaten, or the baby fry are lucky enough to survive to a size large enough where they don't become food for the others. The hobbyist who has provided a mechanism for collecting the eggs from the pond in some fashion, either through the introduction of spawning media, plants or other means to separate the eggs from its parents, will need to provide a food source for these young koi (ie fry).

Fortunately, the eggs take a few days to mature and hatch before the food source becomes critical. Water temperature appears to be the key in how long it takes before the eggs hatch. The most exciting way to witness this development is in an aquarium. The eggs can take anywhere from 3-6 days to develop into fry. The water temperature should be at the same temperature of the water of the spawn without much variation. Temperature swings will be more severe the smaller the container holding the eggs. Its advisable to treat the hatching pond as if it's a quarantine tank – good water quality and use a heater to keep the temperature consistent both night and day. The problem with raising fry in aquariums is the size of the tank (too small), lack of natural food sources, and artificial light. The pro of hatching the fry in an aquarium is they won't be an early food source for predators. Dragonfly larvae, frogs, turtles, other koi and perhaps mosquito fish (gobies) may prey on eggs/fry in outdoor ponds.

After a few days, the fertilized eggs become apparent – the eggs become clearer with 2 black dots (the eyes) while the unfertilized eggs remain somewhat opaque, develop a fungus and start to decay. It is critical to keep water quality and dissolved oxygen levels high during this period. The eggs then start to elongate and eventually the egg becomes a comma-shaped being and they become "cling-ons". They aren't free swimming and remain vertically attached to either the



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spawning media or the sides of the tank but have jerky movements that look like the fry are trying to right themselves and learn to swim. Once the koi are free swimming, they live on their yolk sac for up to 24 hrs before food needs to be available.

The fry have to feed often and they have not developed the instincts to search out food in the first few days after hatching. In the wild (or pond), the koi feed on microscopic algae and water animals. In an aquarium, neither of those exist. Eggs that hatch into fry in the hobbyist's pond has these elements, so its preferable that the rearing tank have sufficient food for these fry to eat if the hobbyist chooses to raise them. Otherwise, the hobbyist needs to provide the fry with frequent food sources (as much as 5-7 daily feedings) for several months until the koi are large enough to scavenge on their own. The first few weeks are frustrating for the hobbyist as die offs are common and sudden. These koi need ample light and have to "swim into their food source" in order to survive. Some fry die apparently of over-eating. Those fry that learn to eat faster then their brothers and sisters will become cannibalistic and either need to be culled or moved to another pond to allow the others to survive. It is not uncommon to have some koi with growth spurts 4 times their brothers or sisters in a very short time.

Under the hobbyists care, there are several first foods to offer fry. Newly hatched brine shrimp are a good first food source. Powdered cyclops (cyclopeeze), rotifers and live young daphnia (water fleas) are natural sources of food. Dried krill ground into a powder is also worth experimenting with as well as flake food for tropical fish and microscopic dried algae (spirulina). Dried egg powder and powdered milk are also options, although these foods are not common natural food sources for koi and the author has not used these in rearing fry. The key to feeding fry is to keep the food source sized smaller than the koi's mouth and provide a hi-protein diet yet balanced with other important nutritional elements such as algae. As the koi grow, so should the size of the koi food. Aquatic-Eco Systems in Apopka, Florida sells a baby koi starter pack that contains brine shrimp eggs, fine ground hi-protein foods and graduated size pellets to raise up to a thousand koi to 1-2" long. Koi also love to eat snails and when placed in a tank containing recently hatched snail populations, the koi fry snack on the snails effectively wiping out a huge population in very short time. Seldom are large populations of snails found within the koi pond but are limited to living in filters or waterfall areas where the koi can't snack on them. The author hasn't experimented with frozen foods or tubiflex worms but those are viable options. Professional breeders likely use the more expensive liquid fry but they are raising thousands of koi for sale versus the hobbyists' approach to raising a few dozen fry.

Culling is an important part of raising high quality koi, so eliminate those koi that have deformities (crooked backs, missing eyes, mal-formed fins, missing gill covers, flared gills, etc) as soon as possible so they don't compete for food. Perform water changes frequently to keep excellent water quality.

Upcoming SAKA Business Meetings

Date	Location
April 27, 2008	Host: Dan and Martha Cover
May 18, 2008	Host: Open
June 22, 2008	Host: Curt and Lisa Ogren – Annual Potluck
July 27, 2008	Host: Concy Richardson
August 24, 2008	Host: Open
September 28, 2008	Host: Bob and Darleen Panter
October 26, 2008	Host: Kazumi and Anson Tripp
November 7-9, 2008	NO MEETING: See you at the Show!
December 7, 2008	Host: Bruce and Wanda Triebel – Christmas Party
Jan 2009	Host: Open




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Feb 2009	Host: Open
March 2009	Host: Open

Upcoming KOI Shows, Pond Tours and Seminars

Event	Dates/Location
Tucson Area Pond Tour	May 3-4, 2008 Contact Debbie Shaw castlerockkings@cox.net (520) 275-4510
Sierra Vista Pond Tour	TBD
27 th Annual AKCA Seminar	June 26-28, 2008 Hyatt Regency (904) 588-1234 Jacksonville, Fl Contact: Jan Brown (904) 269-2504
 29 th Annual SAKA Koi Show and Auction	November 7-9, 2008 Kino Veterans Memorial Park Tucson, Az. Contact: Bob Panter (520) 747-7278 dpanteraz@cox.net



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Annual Membership

Dues are \$25.00 per family from March 1 to February 28 or 29 of the next year. If paid after August 1 \$17.50, September 1 \$15.00, October \$12.50, November \$10.00, December \$7.50.
<http://www.sakoia.org>

Membership Type

_____ Renewal
_____ New Member

Name: _____

Address: _____

City: _____

State: _____

Zip: _____

Phone #: _____

E-mail _____

Today's Date: _____

of Koi _____

Years Keeping Koi: _____

Pond size: _____

Would you like to host a meeting?

Would you like to serve on a committee?

_____ If yes which one?

For 1 year subscription (6 issues)
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City, State, Zip _____

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Method of payment

_____ Check made out to "KOI USA"

_____ Visa or Master card

Expiration date ____ - ____ - ____
Month year

Make Checks payable to: SAKA

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2891 W. Ribera Place
Tucson, AZ 85742