# Rick and Barbara Shook's

Education begins 2:00.



### Rick & Barbara Shook

5714 S White Oak, Hereford Phone: (520) 678-9369

**Important Notices**: Please contact Brent VanKoevering at 780-3980 or Bob Panter if you are interested in hosting a meeting. We are looking for hosts for 2011.

Going forward the newsletter will be distributed via e-mail only, unless requested otherwise. If you do not presently get the newsletter electronically, or if you wish to continue receiving it via snail mail, you must contact Brent VanKoevering at 780-3980 or <a href="mailto:bvankoevering@longrealty.com">bvankoevering@longrealty.com</a>.

# SAKA, Inc Club Officers

| President      | Bob Panter            |
|----------------|-----------------------|
|                | sakabob@yahoo.com     |
|                | (520) 747-7278        |
| Vice President | David Young           |
|                | koiman@mindspring.com |
|                | (520) 682-7697        |
| Secretary      | Lynn Riley            |
|                | (520) 825-9066        |
| Treasurer      | Dan and Martha Cover  |
|                | mardan79@msn.com      |
|                | (520) 297-4071        |

# Committees/Points of Contact

| 2010 Pond Tour      | Jeanmarie Schiller <u>Tucsonpondtour@yahoo.com</u> (520) 299-1876 |  |
|---------------------|---|--|
| 31st Koi Show Co-   | Bob Panter and Jeanmarie Schiller                                 |  |
| Chairperson(s)      |   |  |
| AKCA Representative | Debby Young   |  |
|                     | debbyt@akca.org   |  |
|                     | (520) 682-7697  |  |

| Newsletter Editor      | Brent VanKoevering                           |  |  |  |
|------------------------|--|--|--|--|
|                        | bvankoevering@longrealty.com                 |  |  |  |
|                        | (520) 780-3980                               |  |  |  |
| Koi Health Advisor     | Noel Shaw                                    |  |  |  |
|                        | koidoc@noelshawdc.com                        |  |  |  |
|                        | (520) 400-0335                               |  |  |  |
| Membership Chairperson | n Faye Hall                                  |  |  |  |
|                        | (520) 297-1253                               |  |  |  |
| Raffle Chairpersons    | Jeanmarie Schiller <u>crankyjean@msn.com</u> |  |  |  |
|                        | (520) 299-1876                               |  |  |  |
| Education Committee    | Erin Riley elriley@aol.com                   |  |  |  |
|                        | (520) 818-6490                               |  |  |  |
| Librarian              | Jeanmarie Schiller <u>crankyjean@msn.com</u> |  |  |  |
|                        | (520) 299-1876                               |  |  |  |

Editor's Note: Articles published herein are intended for the enjoyment of all 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.

Presidents Corner 8-10-10

Summer Time and the fish are rest`en easy, or just lay around with me. Is this an example of your koi? Yes it is summer and the water does get a bit warm. This is why your koi are not very active. Just as in winter when the water is cold the koi metabolism slows down, so it does the same thing in summer when the water gets a bit warm. Your koi are fine. They just like to rest out the warm weather. Just you wait and see when the water-cools off a little your fish will be moving around all over the place.

Are there any other questions you would like answered? If there is, just come to one of our meetings. Someone there will have the answer, or we will find out for you. You will never know unless you ask, and you cannot ask unless you come to the meeting. So come on and go the meeting. You will have lots of fun and meet lots of fishy people, and even see a new pond. What more can you want?

Our 31<sup>st</sup> Annual Koi Show and fish auction is just around the corner. Keep those ideas coming in. We need all we can get. Just one little idea can make all the difference in the world. Please help if you can. It is you that make a difference. Thanks for all your help.

Koi, Living Jewels, what we are keepers of, a fish to be proud of. We raise them, try to keep them healthy, feed them and share with others what we learn by having them in our lives.

For the love of Koi,

# Bob Panter, President SAKA, Inc.

**Important Notice**: Going forward the newsletter will be distributed via e-mail only, unless requested otherwise. If you do not presently get the newsletter electronically, or if you wish to continue receiving it via snail mail, you must contact Brent VanKoevering at 780-3980 or <a href="mailto:bvankoevering@longrealty.com">bvankoevering@longrealty.com</a>.

## SAKA, Inc 10% Discount

With your SAKA, Inc 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

**Oasis Tropical Fish** 

3865 N. Oracle Tucson, AZ (520) 408-9700 **Patty's Water Plants** 

By Appt Only E. Benson Highway, Tucson AZ (520) 294-0748

## **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. **We would like to see your pond!** Please contact Bob Panter if you are interested in hosting a meeting.

#### Club Announcements

# **July Business Meeting Minutes**

Date& Location: July 26, 2010, at Lisa and Curt, Mountain View Koi Fish and Nursery in Hereford, AZ

Call to Order: Meeting called to order by Bob Panter at 1:10 PM.

Minutes: Motion made to accept and second the June 2010 Minutes as read.

Number of members in attendance: 30 members.

Treasurer's Report: Current checking account balance: \$8628.52. Martha Cover reported that we received an insurance check in the amount of \$594.67 for the repairs on the damaged trailer and the trailer has been repaired. There is \$50.14 in our Savings Account and the CD value is \$5128.18. Our current membership is at 51 members.

AKCA: Debby Young reports that insurance coverage under AKCA has changed – no special events will be covered by them. The Club will have to have their own insurance to cover our special events. Bob Panter reports he has a lead on new insurance to cover special events and a motion was made and carried for him to pursue more details on this insurance coverage.

Correspondence: No correspondence.

2010 Show and Auction Committee: Everything is going forward for November 13<sup>th</sup> and 14<sup>th</sup>. The Show site is secured and permission to tap into the junction box for electricity has been given. Debby Young is the contact for vendors and/or reservations. Dave Young is arranging for the judges and one has been confirmed.

Old Business: Martha Cover has taken care of the new, required government paperwork for the non-profit status and they have been sent in.

New Business: Tom Ayres has picked up 15 Friendship Awards at a cost of \$250.

Adjournment: The meeting adjourned at 1:45 PM.

Educational Talk: Discussion on the use of steel tanks and precautions that need to be done for the safety of the Koi.

Lynn Riley Secretary

**Featured Articles** 

### GREEN WATER AND STRING ALGAE

Green water and string algae are different forms of algae. Both can cause considerable problems for ponds through out the year. Green water differs from string algae in that it cannot be physically removed from the pond; whereas string algae are stringy or hair like, and can be physically removed.

#### What Causes Green Water?

Green water is caused by the presence of millions of microscopic algae particles, each consisting of one cell. This algae occurs naturally in almost all bodies of water, and can be a problem in ponds during the spring and summer months. In order to grow, algae requires light and nutrients. An excess of either can result in heavy growth and very green water. The nutrients required for algae to grow are normally <u>nitrate</u> and <u>phosphate</u>. Green water is normally worse during summer months when days are longer, temperatures are warmer, and light is stronger. These factors greatly increase the rate at which green water can occur.

#### What Causes String Algae?

String algae occurs naturally in almost all bodies of water and is encouraged to grow by the presence of <a href="phosphate">phosphate</a>, <a href="nitrate">nitrate</a> and <a href="sunlight">sunlight</a>. Phosphate is a vital component of fish foods and therefore enters the water through uneaten food and fish waste. Nitrate is produced as the end product of the biological filtration and through the natural breakdown of organic matter in the pond. Nutrient concentrations tend to build up in the pond over time particularly in the summer when the fish are more active and being well fed. The increased sunlight plus these increased nutrient levels dramatically accelerate the growth of string algae with some species being capable of doubling its weight each day or two.

Steps for Avoiding Green Water and String Algae Problems

There are a number of pond management techniques that can be called upon to help reduce the growth of algae:

- First, you should feed your fish only high quality fish food. Poor quality diets are not well digested by the fish, resulting in excess waste being produced that contribute greatly to a high nutrient load into the pond. This excess of nutrients will stimulate an increased growth of both types of algae.
- Adding plants to the pond can also help limit the growth of algae, since aquatic plants compete with the
  algae for the nutrients in the pond water. Water lilies in particular are great for this purpose, since their
  leaves help cover the ponds surface and shut out much of the sunlight required to stimulate the growth
  of algae.
- Keep the pond bottom clean and clear of sediment. Decaying of this sediment increases the nutrient load for stimulating the growth of algae.

### Controlling Green Water

The most effective way to control green water is the addition of ultraviolet sterilizers (U.V. lights) to the pond water circulation system. These devices work by irradiating the pond water that flows through them with ultraviolet light. This ultraviolet light kills green water algae, allowing it to clump together, so that it can be separated from pond water by a filter. This is an excellent method of keeping a pond free from green water year around. It is important to size the ultraviolet light correctly, as its effectiveness depends on the contact time between the light and the water passing through. In general, an ultraviolet light should support a flow rate that allows the pond total water volume to pass through the light every hour. U.V. bulbs should be replaced every 12 months of bulb life even if they are still burning at that time. U.V. bulbs lose their efficiency over time and become less effective after 12 months life. The quartz sleeve containing the bulb may need cleaning periodically. If the sleeve gets exceptionally dirty, it will cut down on the amount of ultraviolet light effectiveness.

There are other means of removing green water if you do not have an ultraviolet light. These methods are more temporary. There are many products on the market for adding to pond water to remove green water algae. One I will mention is called AlgaeFix. This product when added, as directed to your pond water, causes the green water algae to clump, so it can be filtered out with a pond filter, or can be skimmed off the water surface with a skimmer net.

The addition of aquatic plants to compete with the algae for nutrients, and to shade the pond to deprive algae of essential light are two natural means of reducing the green water effect. A large water change will remove green water temporarily; however it returns rather rapidly.

#### Controlling String Algae.

The most effective way of removing string algae is by mechanical means; however this method is distasteful to most people. Again, there are numerous products on the market that will kill string algae. AlgaeFix does a very effective job of killing string algae and eliminating green water when used as directed on the container. Other products containing sodium percarbonate are very effective on string algae in very shallow water, like streams and waterfalls.

Numerous plants in the pond will reduce algae by competing for nourishment from pond water. The addition of shade over the pond will decrease the growth of string algae, since it deprives it of needed sunlight in order to thrive. After the string algae are killed, you will need to remove the floating dead algae from the pond.

# **Water Testing For Your Pond**

Reprinted from The Valley of the Sun Koi Club Newsletter

Tests! "We don't need tests!" the cry of the beleaguered pond owner who has problems enough dealing with algae, malfunctioning filters and pumps, pond leaks and sooner or later sick fish. Monitoring water quality in a koi pond is often

viewed with the same degree of enthusiasm as preparing a tax return. Who subjects oneself to another bunch of problems? Well, if your tax return is not prepared, your tax problems will not just go away, and if you don't test your pond water, your water quality problems will not just go away.

Unlike paying taxes, testing our ponds is entirely voluntary, so let's consider three good reasons for volunteering. First, knowledge is power. Second, prevention is easier than cure. Third, learning can be fun. The reasons for not testing - to time consuming, too confusing, too expensive and just not necessary - don't stand up in light of the facts, as we shall see. Another consideration is that we generally have koi ponds for two basic reasons - the beauty of the water environment and the pleasure of having koi. Water testing goes to the heart of both these issues - keeping the pond attractive for our enjoyment and keeping the water healthy for the fish. The latter is the most important reason to test. As hardy as koi are, long term exposure to poor water quality will cause stress and disease. Unfortunately, we can not rely on our unaided senses to determine water quality - clear water is not an indication of good water quality from a fish's perspective. Millions of years of evolution have resulted in fish that are superbly adapted to their environment. An attempt to create and maintain an artificial pond environment for even domesticated fish is complicated by the fact that fish are essentially "bags of water living in water" with only a semipermiable membrane to maintain internal integrity.

Terrestrial animals, as ourselves, can be considered "bags of water living in air" with enhanced barriers that, relative to fish, effectively separate and protect us from our environment. We can tolerate pollution and environmental changes much better than fish can because our bodies do not interact with the environment as intimately as do fish bodies. Fish are truly a part of their environment and are strongly and directly affected by its condition.

Because koi are so adapted to and affected by their environment, it is important that natural, healthy conditions be maintained in a pond to ensure healthy, happy, colorful fish. Fish disease issues invariably involve water quality. Poor quality stresses the fish, which in turn causes their immune system to go down, which in turn makes the fish susceptible to disease pathogens. In order to know if there is good water quality, it only makes sense to test it periodically rather than wait for disease symptoms to appear.

"A pond is basically a toilet". Fish waste must not be allowed to accumulate in a pond, which usually means a biological filter must be operating properly. Fish waste and other organic debris are the first step of the nitrogen cycle, a series of events that produces some of the compounds we test for - ammonia, nitrite and nitrate. Algae may colonize and detoxify a pond with high levels of nitrogen compounds, but alga's presence changes water quality for two other things we should test for - pH and dissolved oxygen. The last naturally occurring factors we routinely check are temperature and water hardness.

### When to Test

Individual, one-time tests are only important if the test results indicate a toxic or dangerous condition, such as high ammonia, where corrective action has to be taken immediately. The greatest benefit of testing, however, is obtained when results are plotted on graph paper over a period of several testings, so that trends or directions can be noted early. By knowing the direction your pond's water quality is taking, you can take corrective action before the problem gets out of hand.

Normally, tests for ammonia, nitrite, nitrate, pH and temperature should be made once every week or two. Tests should be made more frequently during periods of change in the pond, such as spring warming, new filter installation, major pond cleaning or repair. At such times daily testings for certain items may be necessary, for example pH test during cement work and ammonia and nitrite tests for new filters. During stable periods such as mild summers, testing may be cut back to once every three weeks, and during periods of midwinter inactivity, testing can be eliminated.

#### **Test Kits**

Home kits all work the same way - there is a small container for a measured sample of pond water, a chemical to add to the sample that will cause the water to turn a certain color, a color chart to compare the result to and instructions to tell you if things are OK or not. Some kits use drops and some use tablets - drops are faster but tablets are easier to measure. Test kits come in either "Master Packs" which contain several basic tests or a single test pack. Refills are usually available and most of the chemicals have expiration dates after which they don't work properly. The basic tests are usually ammonia, nitrite, nitrate and pH.

The following is a discussion on the specific factors tested in a Koi pond. You do not need this information in order to properly test your pond, as the commercial test kits are simple and easy to understand. Read this only if you care to understand the factors behind the test results. Don't worry about the technical measurements, because the color charts in the test kits really make things very simple. There's no reason to convert mg/liter to oz/gallon because only the ratio matters and you don't even need that to read the color chart. What is important to realize, however, is the interrelationship between pH and various factors in the pond. Also, results may vary depending on the time of day and how long the water sample was stored before being tested.

#### **Ammonia**

is introduced by the fish waste and decomposing organic debris, is the most toxic nitrogen compound. It is present in two forms in the pond - free and ionized. Free ammonia is the most toxic and will cause death in very low concentrations. Problems associated with non-lethal elevated levels of ammonia include gill disease, dropsy and finrot. The higher the pH and the temperature, and the lower the salinity or hardness, the greater the ratio of free ammonia to the ionized form. Thus, the higher the pH and or the temperature, the more toxic the ammonia. Test kits measure the total ammonia (free plus ionized). With a properly functioning biological filter, the ammonia level is usually zero in the pond and should be under .1ppm (mg/l). Nitrosomonas bacteria in the filter oxidize ammonia into nitrite, our next compound. If the level of ammonia is elevated, you should immediately add ammonia remover such as Tetra Aquasafe, Kordon AmQuel or make partial water changes. You should also add nitrifying bacteria to your filter and stop feeding your fish until the situation is corrected.

#### **Nitrite**

is less toxic than ammonia, but still very toxic as it inhibits the ability of the blood to carry oxygen. Nitrite is oxidized into nitrate by Nirtrobacter bacteria living in the filter, but some of the commercially prepared bacteria compounds for ponds are rather skimpy in the amount of Nitrobacter present because it is relatively expensive. Thus your pond may experience a nitrite spike as your filter is being conditioned until the Nitrobacter colony reaches sufficient size to deal with all the nitrite. If the nitrite level is elevated according to your test results, you should make a partial water change and add bacteria high in Nitrobacter, such as Aqua 5

#### **Nitrate**

is the end product of the nitrifying phase of the nitrogen cycle. It is much less toxic for koi than either ammonia or nitrite. It is however, a nitrogen compound that is the food and the fertilizer for algae. In nature, nitrate is absorbed by water plants and is reduced into free nitrogen by anaerobic bacteria living in the bottom silt. Hydrogen sulfide and methane gas are given off as a by-product of the anaerobic filtration. An oxygenated, clean pond will not have any anaerobic bacteria present, so nitrate will accumulate in the pond. An algaecide is often used to control algae that would be attracted to the nitrate. Partial water changes of 1\10th per week will flush out the accumulating nitrate. If the nitrate level is over 20 mg\l, you should make water changes immediately or add Aqua 5 Dry, which contains bacteria that remove nitrate without producing hydrogen sulfide and methane gas.

### pН

indicates the ratio of hydrogen ions to hydroxyl ions on a logarithmic scale from 0 (pure acid) to 14 (pure alkaline). Pure water is 7.0, meaning that there is an equal balance of hydrogen ions and hydroxyl ions. Most tap water in the southwest is between 7.4 and 7.6, which is perfect for koi, as they do best in water 7.2 to 8.0. Koi can actually tolerate a wide range of pH, from 6.5 to 9.0. but they cannot tolerate a rapid change - more than .2 per hour. (Note the logarithmic scale means that there are 10 times as many hydroxyl ions at 8.0 as at 7.0). As mentioned above, pH affects the free ammonia\ionized ammonia ratio, with a higher pH resulting in a greater concentration of the more toxic free ammonia. To make things more complicated, algae and other water plants can drastically change a pond's pH from night to day, due to a change in the amount of dissolved carbon dioxide present in the water. We're concerned about rapid pH shifts not only because of the ammonia ratio, but also because the fish are trying to keep their blood pH even during these shifts, thereby causing stress. Carbon dioxide mixes with water to form mild carbonic acid; therefore, more carbon dioxide means a lower pH, and less carbon dioxide means a higher pH. A bloom of algae will take up a lot of carbon dioxide during daylight for photosynthesis and emit a lot of carbon dioxide at night during respiration. Buffers such as bicarbonate ions help maintain the amount of carbon dioxide and therefore the pH remains even in the pond, but if there's too much algae for the available carbon dioxide, it will be obtained from the bicarbonate ions in the water, thus reducing the buffering agent and increasing the risk of rapid pH changes. Finally, even though koi can tolerate extremes of pH there are diseases directly caused by the stress. Acidosis is a reaction of fish to acidic conditions, in which they act highly agitated, with a lot of jumping. A rapid lowering of pH will cause quick death, while a slow lowering below tolerance levels will cause few behavioral changes until the inevitable death. In alkalosis, a reaction to conditions that are too alkaline, the gills and fins are destroyed; otherwise the symptoms are similar to acidosis. Continued high pH can be caused by improperly cured or sealed concrete ponds or mortar work. New concrete ponds should be sealed with penetrating water based or epoxy compounds, which not only provide a water seal, but also bond with the lime to eliminate pH problems. Cement based water seals don't do anything to control pH. For temporarily raising or lowering pH, you should use sodium bicarbonate or sodium monophosphate respectively. If fish are in the pond be sure to alter pH gradually - no more than a 0.2 change per hour. If an algae bloom is causing the pH shifts or extremes, you have to first determine if you filter is working properly, in which case it's safe to kill the algae (while monitoring dissolved oxygen levels). If an improperly operating filter is the

cause of the algae bloom, you have to first ensue safe levels of ammonia and nitrite before it is safe to control the algae. Remember, go slow in fixing the problem that probably took a long time to develop. Finally, if algae are present, take an early morning and a late afternoon reading before taking corrective action.

### **Temperature**

is often viewed by pond owners as a guide to feeding, more than as a health issue for koi. Temperature should be monitored for both daily and seasonal extremes. Temperature affects dissolved oxygen levels, respiration, metabolic rate, pH balance, free ammonia\ionized ammonia ratio and osmoregulation. Koi can tolerate a broad range of temperatures, from ponds that are iced over; to water up to 90F, better than they can tolerate sudden shifts in temperature. If you have a shallow pond (less than 2 feet) in full sun along with cool summer nights, the pond temperature may be changing by more than four degrees an hour, causing stress to the fish. Greater splashing of the water and shading may control the problem. If your pond is subject to stressful temperature changes, a 0.1% solution of sea salt containing calcium, potassium, sodium and trace elements will reduce the stress as it aids the kois' osmoregulation. As with pH, do not drastically alter a pond's temperature. Fish can tolerate a low to a high temperature change better than a high to low change.

#### **Water Hardness**

consists of two elements, permanent or general hardness and temporary or carbonate/bicarbonate hardness. Koi do better in hard water because of the relation of salt within their bodies to the dissolved salts in the pond. In soft water, the difference in salt concentrations means the koi have to work harder, through the process of osmoregulation, to prevent the salts within their bodies from diffusing out through their gill membranes. Harder water allows the koi to ease up on osmoregulation and therefore reduce stress. As mentioned above, bicarbonate ions buffer the water, reducing pH shifts, another cause of stress in koi. Koi do well in carbonate hardness of 150-300 mg/liter or 9-18 degrees dll. In most koi ponds the water is too soft due to the fact that there is no natural mud bottom that leaches minerals into the water. Marine salt and sodium bicarbonate increases hardness and will also cause pH to go up. A permanent salt solution of 0.1% is beneficial to koi, and works out to eight pounds per 1,000 gallons. Check your pH if you add salt, and do not use table salt. Salt will not evaporate out and needs to be replaced only if water is drained from the pond.

### Dissolved oxygen

is usually only a warm weather concern, as it is associated with water temperature and algae. However, the larger the fish, the greater the oxygen demand - low levels will stress and kill your biggest koi. Ponds that have been safe for many years become unsafe as your fish grow larger. The colder the water, the greater its capacity to hold dissolved oxygen. Algae takes up oxygen at night, and an algae bloom can cause suffocation in large fish and inhibit the oxidation process of nitrifying bacteria. Also, dying algae and decaying organic material takes up oxygen. Testing for dissolved oxygen allows you to determine if your pond has the maximum amount of oxygen for the temperature of the water. Splashing the water into small droplets with a fountain or waterfall is best for aeration, although venturi valves on underwater jets and air compressors also do a good job of oxygenation.

#### **Chlorine and Chloramine**

should be tested for if your water supply is from any source other than your own well. Chlorine will burn off by itself in a day or so, but chloramine must be broken down and removed chemically. Check with your local water agency to determine whether they add chlorine or chloramine. These chemicals damage the gills and liver and even in low concentrations can cause stress that ultimately leads to disease. Also, frequently overlooked is the fact that they are added to the water supply to kill bacteria. The beneficial, nitrifying bacteria in you biological filter can be killed off by chlorine and chloramine in concentrations that do no obvious damage to your fish. Good products on the market to eliminate chlorine and chloramine include Tetra Aquasafe, Kordon AmQuel and Aqua 5 chlora Gone.

#### Copper

should be tested for if water supplied to the pond is via copper pipes or if coins are thrown in the pond. Copper, in its toxic form will leach into soft water more readily than into hard water. It damages skin and gills and can cause sudden death that is very hard to trace. It also kills the nitrifying bacteria in your filter, which results in an ongoing algae problem. Copper is used in several pond treatments and should be monitored if you are using any such treatments. Concentrations above 0.015 mg/liter are dangerous to fish, and even lower levels can kill the beneficial bacteria in a biological filter. In conclusion, testing gives you the information you need to ensure the best possible conditions for your fish, as well as the information needed to maintain water clarity. It only takes a few minutes a week, and is about the best investment of pond maintenance time you can make.

# Kawarigoi Korner



**Important Notice**: Going forward the newsletter will be distributed via e-mail only, unless requested otherwise. If you do not presently get the newsletter electronically, or if you wish to continue receiving it via snail mail, you must contact Brent VanKoevering at 780-3980 or <a href="mailto:bvankoevering@longrealty.com">bvankoevering@longrealty.com</a>.

If you have suggestions for the newsletter or items to be included in Karawagoi Corner or the Calendar, Please contact Brent VanKoevering at 520.780.3980 or <a href="mailto:bvankoevering@longrealty.com">bvankoevering@longrealty.com</a>.

# **Upcoming SAKA Education and Business Meetings**

| Date                      | Location                       |  |  |
|---------------------------|--------------------------------|--|--|
| August 22, 2010           | Host: Rick Shook               |  |  |
| <b>September 26, 2010</b> | Host: Bob and Darleen Panter   |  |  |
| October 24, 2010          | Host: Rich Timerhoff           |  |  |
| November                  | No Meeting See you at the Show |  |  |
| December                  | Host: Open                     |  |  |
|                           |                                |  |  |
|                           |                                |  |  |
|                           |                                |  |  |
|                           |                                |  |  |
|                           |                                |  |  |
|                           |                                |  |  |
|                           |                                |  |  |
|                           |                                |  |  |

# Shows, Pond Tours and Seminars

| Event  | Dates/Location/Links |
|--|----------------------|
| 31st Annual SAKA, Inc.<br>Koi Show and Auction | November 12-14, 2010 |
|  |                      |
|  |                      |
|  |                      |



Mail for KOI USA Subscription to
P.O. Box 469070
Escondido, CA 92046
Or
Subscribe on-line at
subscribe@koiusa.com
Or

Subscribe by phone at 1-888-660-2073

| For 1 year subscription (6 iss<br>\$24.95US for<br>\$20.00US specifications | sues) r any person in US or Canada rcial price for AKCA Koi Club members |  |  |  |  |
|---|--|--|--|--|--|
| Club affiliation (for special p   | orice)   |  |  |  |  |
| Subscribers' name   |  |  |  |  |  |
| Subscribers mailing address   |  |  |  |  |  |
| City, State, Zip  |  |  |  |  |  |
| Phone number  |  |  |  |  |  |
| Method of payment   |  |  |  |  |  |
| Check made out to "KOI USA"   |  |  |  |  |  |
| Visa or Master card   |  |  |  |  |  |
| Expiration date   | year   |  |  |  |  |



### http://www.sakoia.org Annual Membership

Dues are \$30.00 per family from March 1 to February 28 or 29 of the next year.

| 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?                       |  |  |
| Make Checks payable to: SAKA, Inc.      |  |  |

Mail to: Martha and Dan Cover 2841 W. Puccini Place Tucson, AZ 85741