

## Next Meeting: February 11, 2012 – 9:00 a.m.

The February meeting will be held at the home of Tom & Carla Briggs.

Tom will be giving a presentation on DIY bio-filter building. Please note his write -up on his presentation in this newsletter.

They have finished their pond construction from last February and their old 1500 gallon pond is now 5250 gallons. He's anxious for the members and guests to see his finished project.

Address: 4310 E. Glenhaven Drive, Phoenix, AZ 85048-0504. Phone 480-510-2403.

Directions: From either I-10 or San Tan 202 take the Pecos Road West exit 1 mile to 40<sup>th</sup> St. Go right on 40<sup>th</sup>, ½ mile to Frye. Hang another right. Go ½ mile to 43<sup>rd</sup> Place. Again, go right, to Glenhaven Dr. Right on Glenhaven. We're the 4<sup>th</sup> house on the right.

Please bring your own lawn chairs and bags/buckets for any plants/fish that may be available.

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**2011 dues are \$25.00 per individual/family and are payable by December 31<sup>st</sup>. Please send your payment to:**

Ed Tunstall  
5439 E. Dolphin Ave.  
Mesa, AZ 85206-2208

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### President's Letter

Hi GPPS members!

I hope everyone is doing well and 2012 is a great year for you, your family and friends. Well the year started off HOT, HOT, HOT! There was a great turnout at the January meeting. I would like to thank our gracious host Paul "Dief" Diefenderfer of Desert Rat Forge for opening up his shop and putting on an outstanding presentation and demonstration on metal working. Dief shared some of the materials and techniques he uses to make his one of a kind creations and then he fired up the forge and gave us a demonstration on how to make a fish out of a straight piece of metal bar stock. It was interesting, entertaining, informative and fun! You can check out what Dief does at his website: <http://desertratforge.com/>.

The message below is from last month's letter but I have not received any response or input from our members so I am running it again.

Please submit any/all suggestions you can think of for the topics below. They are all import topics and they require your input. Some of our members have been with the club for many years while other are brand new but you all have great ideas so please submit them now. If you are an older member, think back to years past and submit suggestions on any/all of these topics based on your past experiences. If you are a newer member please submit ideas based on what you want out of your club. The key here is that this is **YOUR** club and it is **YOUR** responsibility to submit suggestions to help not only you, but your club, be the best club experience it can be. The best experience is what you all were after when you became a member so participate

1. Ideas for meeting topics
2. Ideas for special meeting locations
3. Ideas for July/August field trips
4. Ideas for fund raising activities and/or products
5. Ideas for club activities
6. Ideas for club growth and improvement

The next general meeting will be on February 11, 2012. The meeting will be at the home of Tom and Carla Briggs in Ahwatukee. Tom will be showing us how to make a "do it yourself" biofilter. Please come on out and enjoy our host's presentation and hospitality!

I hope to see you at the February meeting!

Dave Nelson – President

**\*Editors Note: It was decided at this meeting that the GPPS Pond Tour will be May 12, 2012**

**A little background/ homework before the DIY bio-filter building class at the February meeting:**

### Types of filtering:

1. **Mechanical filtering** - separating out the particles of dirt, fish waste, leaves, etc. from the water.
2. **Biological filtering** - using beneficial bacteria to naturally process fish poop/ ammonia into less toxic nitrite then finally nitrates, which are fertilizer for algae and other aquatic plants.
3. **Chemical filtration** - using activated carbon or other materials to remove various chemicals from the water such as ammonia, chlorine, pesticides, etc.

All these methods of filtration can be used to help clean the water for the benefit of the fish and other creatures living in your ponds.

Biological filtration is a natural process that uses 2 varieties of bacteria found in pond water to break down ammonia/fish waste into nitrite (still toxic to fish) then to nitrate (bad for fish at higher levels). The nitrate must be removed from the pond by one of two ways; either diluting it out with water changes or adding algae or other plants to that use up the nitrate as they grow.

The process of biological filtration naturally occurs on all surfaces in the pond. The reason for adding an external biological filter system is to increase the surface area for the bacteria to multiply on and allow for the processing the large amounts of fish waste generated by backyard ponds. The biological filter is just an efficient home for bacteria to multiply in and consume/process fish waste. The bacteria grow/ multiply on artificial 'media' that is designed to provide massive amounts of surface area within the filter.

### **Types of biological filters:**

1. **Pressurized**
2. **Gravity up flow**
3. **Gravity down flow/ trickle tower**

The pressurized filter uses a closed vessel to contain the filter media and usually have a reverse flow function to clean them. This feature keeps the operator cleaner during cleanouts. This design tends to be left to the professionally built systems due to engineering constraints and cost.

The gravity up flow can be an open vessel that uses media that is fully submerged in water at all times. This keeps the media wet and alive longer during power failures. This is a common do it yourself type filter, but it can be harder to clean.

The down flow trickle tower can use an open vessel and usually rains the water over the media keeping them wet but not submerged. This can help to add more oxygen to the system, increasing efficiency. This is another do it yourself friendly design with many good variations that can be adopted.

*DIY Biofilter Building, cont.*

**Media:**

The part all three of these filter types have in common is they use a media to grow the beneficial bacteria on. The more surface area that is provided by the filter media, the more bacteria can grow and greater volumes of water can be processed. Some examples of cheaper media are gravel, lava rock and sand. These materials are cheap and easy to find but are a nightmare to clean once dirty. You can buy designer media made of space age plastics or ceramics but they can cost \$100 per cubic foot. The middle ground for the do it yourself filter is some sort of sponge/ kitchen scrubber.

**What's left:**

Once you have your biological filter installed it will need 3-4 weeks to fully colonize with the beneficial bacteria. The bacteria can be purchased in bottle form or by simply getting some pond water from a trusted source. During the grow in phase you'll need to feed the fish a little to generate some fish poop for the process to start but not so much to make to pond toxic like a port o potty.

Depending on the pond you'll need to clean the filter between 1 to 10 or more times a year. It would be ideal to oversize the filter to minimize the number of cleanings to avoid depleting the system of the necessary bacteria that occurs when cleaning out the other biological residues. It is also recommended to have some form of mechanical filtration before the biological filter to prevent larger debris from plugging up the media.

Now that you have a working biological filter don't forget to add some plants to your pond or you'll end up with an algae farm.

Article: Tom Briggs

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**Welcome to New Member:  
Helen Corson of Scottsdale**

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**GPPS MEMBERS!**

We are now taking orders for Iris and Lily plants from the Japanese Friendship Garden. As you know, the GPPS members have been assisting in the care of the Iris and Lily bogs. This year we will be selling the cuttings from the Iris and Lillies to benefit GPPS and the Japanese Friendship Garden.

We will be doing the cuttings on March 3, 2012 so that the plants will be available at the March 10<sup>th</sup> meeting.

The plants will be \$20.00 and will be available on a first come, first served basis. To place your orders please contact Gene Goerke at [Plantabi@concentric.net](mailto:Plantabi@concentric.net). Volunteers will each receive one plant free of charge.

## Pond Happenings



A huge thank you to Paul "Dief" Diefenderfer of Desert Rat Forge for hosting our group in Cave Creek. He demonstrated how to forge a fish for his sculptures. When he completed the fish, he raffled it off and it was won by Dave & Mae Nelson.



## Pond Happenings



Paul also discussed ideas for using a periodic spring to create movement for your pond.



### Upcoming Dates:

**March 3<sup>rd</sup>** Japanese Friendship Garden volunteer project. 7a.m., 1125 N. 3<sup>rd</sup>, Ave. Phoenix. If you would like to volunteer to help, please contact Gloria Skylstad, [gskylstad@gmail.com](mailto:gskylstad@gmail.com) or Gene Goerke, [Plantabi@concentric.net](mailto:Plantabi@concentric.net). We would love to have you join us. We will be working in the bogs and harvesting Lily and Iris plants.

The Valley of the Sun Koi Club, Inc. 2012 Annual Koi Show dates and times will be announced at a later time. It will NOT be held at Style Nursery.

GPPS Annual Pond Tour will be held on Saturday, **May 12<sup>th</sup>**. If you would like to be a tour host, contact Gene Goerke at [Plantabi@concentric.net](mailto:Plantabi@concentric.net).

## Pond Happenings

### EXECUTIVE COMMITTEE

President	Dave Nelson	Bigd_1956@yahoo.com	480-357-7205
Vice President	Gene Goerke	Plantabi@concentric.net	--
Treasurer	Ed Tunstall	lctricfrog@cox.net	
Secretary	Fern Shaw	Fdg1953@cox.net	602-332-8112
Events Coordinator	Kristy Jolly	tcterret@hotmail.com	
Newsletter Editor	Gloria Skylstad	gskylstad@gmail.com	-
Librarian	Gary Ures	<a href="mailto:ures@koioffire.com">ures@koioffire.com</a>	480-278-6847
President	Dave Nelson	Bigd_1956@yahoo.com	480-357-7205

### GPPS Newsletter

Monthly Submission Deadline: 18<sup>th</sup> of each month. Newsletters will be sent out the 28<sup>th</sup> of each month. All submissions are subject to review and all materials become the property of GPPS. Due to space and timing, it is not guaranteed that all submissions will be printed. Submissions can be emailed to [gskylstad@gmail.com](mailto:gskylstad@gmail.com)

**Did you know?** Receiving an electronic version will save GPPS Members money every month. Contact [gskylstad@gmail.com](mailto:gskylstad@gmail.com) if you'd like to change your newsletter option to "paperless".



**Have a tip, trick, recommendation or idea? Send it to [gskylstad@gmail.com](mailto:gskylstad@gmail.com)**

## Pond Happenings

Upcoming Meetings & Events			
Month	Location	Month	Location
Feb 11, 2012	Tom & Carla Briggs, Phoenix	May 12, 2012	2012 Pond Tour
Mar 10, 2012	Doneen Rogers, Mesa	June 9, 2012	Bob & Charlene Gilliam. Chandler
Apr 14, 2012	Japanese Friendship Garden	July	No Meeting

### A request from GPPS Webmaster Dennis Beard

GPPS has "FAQs" that are listed on the <http://www.phoenixponds.com/archive/gppsfaq.htm> web page. This page is now a link on the left navigation bar titled -- guess? FAQs

I solicit your assistance in helping the club's website. Please write some questions with the answers and send them to the webmaster link on the FAQ page. If you know a good outside source to your answer -- copy the address at the bottom of the supplied answer.

### Time To Rejoin GPPS for 2011!

Membership forms will be on the table at the monthly meetings or contact the treasurer,  
Ed Tunstall, 5439 E. Dolphin Ave, Mesa, AZ 85206-2208.

The cost is \$25 to join or renew your membership. Dues should be received by December 31st.



11058 W. Oraibi Dr  
Sun City, AZ 85373

