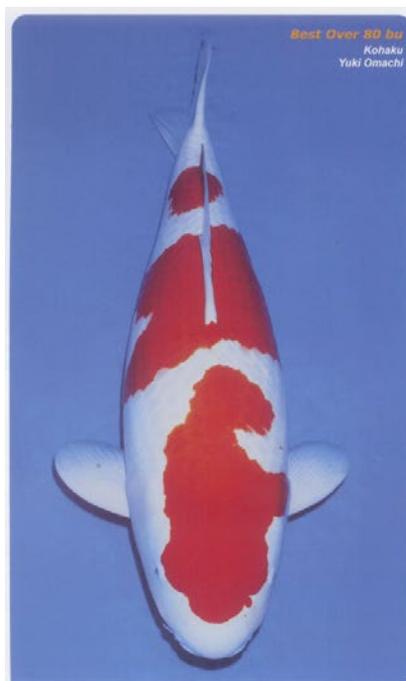


NEWSLETTER



Left: Grand Champion

From 35th ZNA Kanto District Nishikigoi Show



Right: Best over 80 bu

Northern Branch Meetings

Wanneroo Recreation Centre, Scenic Road, Wanneroo
7.30pm, second Tuesday of each month

Next Meeting: **13th December**

Agenda: Combined branch meeting.

Surprise Christmas Fun followed by Car Park Sausage Sizzle with a few lemonades. BYO Lemondae!

Southern Branch Meetings

Rotary Hall, Sandgate Street, South Perth
7.30pm, forth Wednesday of each month (except December)

Next Meeting: **No meeting in December & January**

November 2016 Edition

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Got a story for the newsletter? Send them in to us editor@koiclubwa.com

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Welcome & News

Welcome to our new and current members we hope to see you all at the next club event.

It is November already and spawning season is in full swing. We have heard from lots of you that all sorts of great spawns have been going off over the last month or so and we can't wait to see what turns out.

Even though we are approaching the end of the year where most of us get some sort of break, however short it may be, we still have a few things in this issue for you.

The end of year party is coming up soon. You should have the invite already but we have the details again for you on the next page. Please make sure you have RSVP'd so we know you are coming.

It is your last chance to grab the filter up for auction, see the link in the next page as well.

Plus we have some exciting news on Page 8 to share. As well as a very interesting article on GinRin scales.

This will probably be the last newsletter before the end of the year, so from the KSWA we wish you and your family a safe and happy festive season.

In the meantime, happy koi keeping everyone!

KSWA Financial Report - October 2016

2016 Event Calendar

Sunday 4th December - KSWA Christmas Party @ Shona's, South Guildford

Tuesday 13th December - Combined Branch Meeting, Wanneroo

No Southern Branch Meeting in December

Tuesday 10th January - Northern Branch Meeting, Wanneroo

No Southern Branch Meeting in January

KSWA END OF YEAR PARTY

Pond Filter Auction

This is your last chance to get the Oase FiltoClear 16000 pond filter which we are Auctioning to raise money for the club.

We have listed this item on Ebay so that everyone in Australia has a chance to buy it. If you are interested in this item you can check out the ebay link below as well as some information on the filter.

Filter Specification: <http://tinyurl.com/h9kf293>

Ebay Link: <http://tinyurl.com/h9wkm2y>



Kin-Gin-Rin Scales

This article appeared in the August 2016 ZNA Nichirin Magazine but for this is for those that don't get it as this was a good article on KinGinRin scales.

Kin-Gin-Rin
Robert Wicker,
ZNA Carolina Chapter

For more than a century, the dedication of generations of Japanese Nishikigoi (koi) breeders have brought the koi hobbyist dozens of variations of colored carp for their enjoyment. This article will look at one of the varieties of Nishikigoi, kin-gin-rin and some of the recent genetic and histologic studies which have shed some light on why they “sparkle”, as well as its biologic effects.

Kin-gin-rin, (in Japanese Kin=gold, Gin=silver, Rin=scale) or commonly Ginrin, has been noted on koi as early as 1929. Kin-gin-rin can now be found on virtually every scaled koi known. Kin-rin is the name given to those scales with a golden hue due to the background color. This would be seen over the redorange colors seen on gosanke, goshiki, benigo, etc. Gin-rin, strictly speaking refers to the silver reflection that can be seen over white or light colored areas as well as black. As can be seen from the above picture of a kohaku, koi can have both kin-rin and gin-rin scales. For the rest of this article, we will consider the term “ginrin”, all inclusive of kin-rin and gin-rin.

History

Mr. Eizburo Hoshino is reported to be the first person to discover and name kinginrin in 1929, he acquired a wild magoi with a few glittering scales from a local fisherman. Mr. Hoshino was a noted breeder and has been credited with developing Ki Utsuri and Taisho Sanke. The first recorded showing of a kinginrin was in 1929 at the Yamakoshi Nishikigoi Show where a two year old female kinginrin kohaku was shown and was admired for her beautiful scales but scorned for her poor skin color. As can be seen from the above two statements, koi history can be a bit incongruous as it is improbable that both of these events could have occurred in the same year. However, it remains that 1929 seems to be a seminal year in the history of ginrin.

Subsequent years of breeding prior to World War II revealed mixed effectiveness with difficulty getting uniform scale placement, especially with gosanke. Ginrin was also seen on shusui and mirror carp were noted which had large mirror scales along the lateral line, these mirror carp are also known as kagamigoi.

True improvement and stabilization of ginrin occurred after World War II, especially in the Hiroshima region. The ginrin koi in Niigata were noted to have a relatively flat sparkle and to be more laterally displaced. Masaru Uedera is credited with stabilizing and improving the early Niigata ginrin to what is currently known as Hiroshima gin. The Hiroshima ginrin is also known as diamond ginrin (or Diagin), for its spectacular sparkling appearance. It is thought to be derived from the flatter beta ginrin from the Niigata region. These more refined Hiroshima ginrin were then sent back to Niigata where the subsequent refinement of Niigata ginrin (beta ginrin) was initiated.

Pearl ginrin was developed before Hiroshima ginrin by Hiroyama Kobayashi and later improvements by Kazuo Sekiguchi. The Sekiguchi family still breeds pearl ginrin to this day.

Echigo Ginrin refers to the three types of ginrin (kado, pearl, and beta ginrin) other than Hiroshima ginrin. This name comes from the region of Niigata where these types were developed and raised. Further discussion of these different types is to follow.

Histology

The cause of the mirror like appearance of ginrin scales is the formation of guanine crystals or plates within the cells of the scale that reflect light. Those cells responsible for light reflection are termed iridophores. Pigment or color producing cells are termed chromatophores.

Recently, several papers have been published which have advanced our knowledge of not only ginrin, but hikari varieties of koi as well. In 2007, Avital Levy-Lior, et al published an article in the Journal of the American Chemical Society on the stacking of anhydrous guanine crystals and their packing into cells being the cause of their enhanced light reflective properties.

Most recently, Dvir Gur et al, published an excellent article looking at the molecular basis of the reflective abilities of scales from hikari and ginrin scales. From this study four conclusions were drawn regarding the properties of ginrin scales to be so effective in reflecting light:

1. The skin under the scale is much more densely covered with crystal stacks.
2. The orientation of the crystals is almost parallel to the scale surface in the ginrin, whereas the crystals form an angle of 30 degrees in hikari scaled koi.
3. The number of layers of iridophores underneath the scale and the number of crystal stacks inside iridophores is much higher in ginrin koi.
4. Interdigitation between the different crystal stacks within the iridophores and subsequent spacing which enhances reflectivity is noted in ginrin koi.

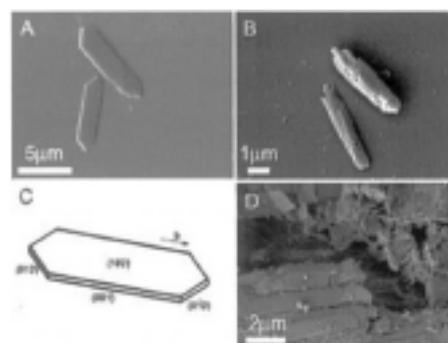


Figure 1. (A) SEM micrograph of isolated biogenic crystal from the skin of Japanese Koi fish. The crystals adopt elongated semi-hexagonal plate-like forms. (B) SEM micrograph of in vitro grown anhydrous guanine crystals crystallized from an anhydrous solution of DMSO. They are stepped and much thicker than the biogenic form. (C) Schematic representation of the morphology of the biogenic crystals. The crystal planes identified are the (102) basal plane and the (011) and (012) planes. (D) Guanine platelets from fish skin. The multiple layer assembly of the single crystals is observed in situ.

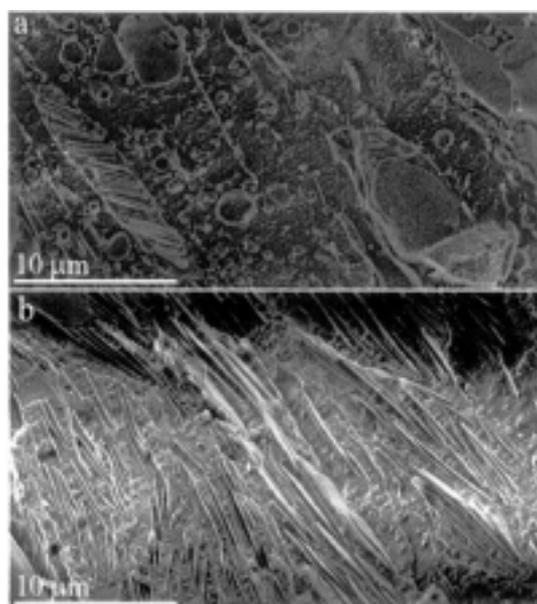
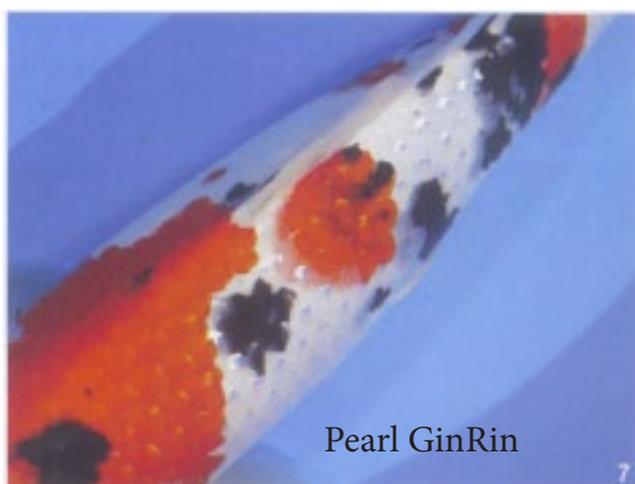


Figure 2. Cryo-SEM micrographs of high pressure frozen and freeze fractured scales and skin, showing the orientations of the crystals relative to the scale and the number of iridophores in a cross section. Different cells are delimited with different colors. a) Iridophore cells from a 'Common' Koi - there is only 1 layer of iridophores, and in this layer the majority of the crystals form an angle around a mean value of 30° to the scale surface. b) Iridophore cells from a Gin Rin scale - the majority of the crystals are almost parallel to the scale and there are up to 5 layers of iridophores in the cross section. Black lines indicate the direction of the scale surface.



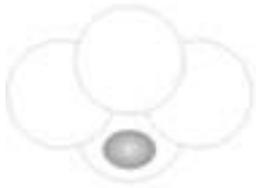
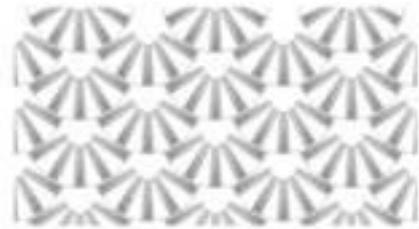
Ginrin

Sparkling scales, also known as kinginrin.
There are four types of ginrin.



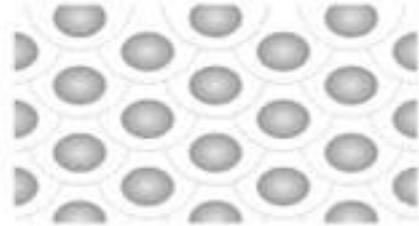
Diamond Ginrin

Ginrin rays that go to the end of the scale. Probably the common version of ginrin.



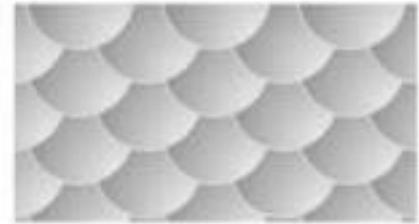
Pearl Ginrin

Round ginrin centered in the middle of the scale



Beta Ginrin

Ginrin covers the entire scale



Kado Ginrin

Ginrin covers only on the edges of the scale

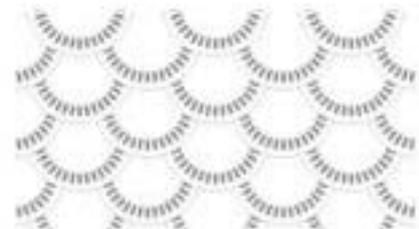


Photo 1 courtesy Ian Andrews:

Beta ginrin is considered the most refined and covers the scale completely. It is much less common than Hiroshima gin. True examples of fully scaled beta ginrin koi are very difficult to find. It is much more common to find beta ginrin scattered irregularly or in some cases just covering a portion of the scale.

Photo 4 courtesy Ian Andrews: Hiroshima or diamond ginrin is the most common type of ginrin seen. It has the appearance of an artists paintbrush having been moved over the scale with the brush strokes still being seen. It also has been referred to as a “cracked” glass appearance. The following picture demonstrate these variations.



Photo 7 (previous page) courtesy Mike Perret. Pearl ginrin sometimes called Tama-gin is the result of the guanine crystals being located in a single area of the scale, usually appearing centrally.

Genetics

In 2015, Gomelsky, et al produced the first paper on inheritance of Diamond (Hiroshima) ginrin. The study utilized crossing different phenotypes of ginrin with nonginrin fish and to determine the inheritance of the trait. Secondary evaluation of possible pleiotropic effects on fish growth and survival was also studied. Evaluation of first ginrin scale trait visibility was noted to be at 6 weeks after hatching.

The ratios of progeny obtained from F1 and F2 breedings were consistent with simple Mendelian dominant principles, Gr/gr. This is consistent with fish with Gr/gr and Gr/Gr genotypes having ginrin scales. Those fish with genotype gr/gr will demonstrate nonginrin scales.

The data was also analyzed for length and weight of koi at 5 months. The nonginrin fish were significantly larger with mean length 19-42% greater and weights being 1.6-2.7 times greater. Further evaluation of survival revealed that proportion of ginrin fish was less than expected in F2 progeny and increased mortality was also noted in the time frame from 2 to 5.5 months of age.

Obviously further studies need to be done to evaluate inheritance of other types of ginrin.

Summary

Ginrin koi have become a staple of many hobbyists ponds and add a flare of brilliance with their sparkling scales. As with all things not all hobbyists approve of ginrin koi. Blurred edges of patterns and difficulty assessing beni and sumi colors due to the reflection from the ginrin scales are concerns to some hobbyists. Varieties that seem to benefit the most from ginrin scales are the single color koi, exquisite examples of sora-goi and chagoi have been noted. However, the quality of ginrin breeding has improved dramatically over the years and beautiful examples of ginrin gosanke are being seen.

There are some potential downsides to ginrin koi. Scientific studies have proven that ginrin koi on average, do not achieve the size of koi with regular scales. It has been noted that as the koi age, there can be a fading of the shine from the ginrin scales. The pearl ginrin in particular, may fade away completely. Although the pearl ginrin sanke pictured above has its ginrin at age 10, the koi itself has remained small. It may well be as the koi ages and grows, the growth of the skin will affect the reflective surface area of the scale with resultant dulling of the reflection of the ginrin.

There are now examples of ginrin koi having atypical placement of kin-rin and gin-rin over shiroji and beni, respectively. This calls into play our current concepts of iridophore and chromatophore placement and migration. Needless to say further evaluation of this finding is necessary.

The progress that breeders have made with the quality of ginrin koi over the last several decades has been impressive. As time goes on, we can only expect continued improvement in quality of ginrin and conformation/size. The breeders of Nisikigoi in Japan are the absolute masters of applied genetics. More than a century of knowledge passed from generation to generation on stringent breeding and culling practices have led to this mastery. We can only hope that further scientific studies can help us to understand the biologic nature of these variations in other varieties of Nishikigoi as well.



Photo 9 courtesy Lisa Warren, koi owned Margy McManus

Kado ginrin is where the ginrin is located at the external rim of the scale, evident in this picture on the trailing edge of the scale.

KSWA Store Sponsors

The KSWA has contacted the local fish stores to arrange a special discount for our members to receive when they purchase from their store.

All you need to do is show your membership card at point of sale. We have sent all membership cards out via email so check your inbox or request it from us at membership@koiclubwa.com. You can either show it from your device or print it out and keep it with you.

We thank the following stores that are currently offering this discount.



26 Woodvale Drive, Woodvale
Phone: 9409 9248
Open 9am-5pm Monday to Saturday
Open 11am to 3pm Sunday



4 / 176-178 Bannister Road, Canning Vale
Phone: 9455 1411
Tuesday – Friday: 9:30am to 5:30pm
Saturday – Sunday: 9:30am to 5pm



Cnr Carrington & Forsyth Streets, O'Connor
Phone: 9314 7630
Monday to Friday: 9.00am - 5.30pm
Saturday: 9.30am - 5.00pm
Sunday & Public Holidays:
11.00am - 4.00pm (Most Public Holidays)



8/1500 Albany Hwy
Cannington WA 6107
Phone: 9458 1970
Monday - Wednesday, Friday
8:30am till 6pm
Thursday 8:30am till 9pm
Saturday 8:30am till 5pm
Sunday & P/Hol 9am till 5pm
CLOSED Jan 1, Australia Day,
Good Friday & Christmas Day



2316 Albany Hwy, Gosnells
Phone: 9490 2510
Monday, Wednesday - Friday: 9.00am - 5.30pm
Saturday: 9.00am - 5.00pm
Sunday: 10.00am - 5.00pm
Closed Tuesday & Public Holidays

Advertising

The club is offering some advertising space on the trailer which we take to each fish related event several times a year. It would be seen on the freeway and roads by many others on the way to and from these events as well. This is great way to help the club fund raise and to advertise your business.

We have 2 spots left on a 3 year term for just \$300. You will be able to put your advertising on both sides of the trailer to ensure it is always seen. You will need to provide the advert in adhesive sticker form at a size equivalent to A2 Poster paper, which is roughly 60x40cm in landscape format. We can help put you in touch with someone able to produce this for you.

Any club member is free to advertise any business they like, it doesn't have to be koi or pond related, subject to committee approval.

If you are interested please contact the committee info@koiclubwa.com to secure your spot.

For All Your Koi Veterinary Needs

Aquatic Veterinarians: Perth | Melbourne | Sydney • Aquatic Animal Specialists: Townsville



- Pet Fish
- Public Aquaria
- Aquaculture
- Medicines
- Diagnostics
- Research
- On-site Veterinary Services
- Lab Services



The Fish Vet

The Fish Vet – Dr Richmond Loh *BSc, BVMS, MPhil, MANZCVS, CertAqV*
thefishvet.com.au | thefishvet@gmail.com | 0421 822 383



KSWA Northern Branch – November Meeting

Date: November 8, 2016

Attendance: 19

Apologies: Vince & Lina

Allan opened the meeting at 7.39 and welcomed all members and new member Joe.

Small Koi Show Discussion, The Executive Committee asked the Branches to discuss this topic and report back.

The point of discussion was whether the size limit needed to change from 40cm to 45cm ?

A very good discussion was held with many members contributing to the debate. Both points for and against a change were raised and debated over a 30min period. At the conclusion all members present agreed unanimously to support the Executive Committee if it decided to increase the size to 45cm. The members present also agreed, that they saw little benefit in putting forward a survey to all members on the topic. This was seen as additional work for Executive Committee and added little to the discussion just held.

Jun had 3 questions;

Q1. If you use tap water to fill a spawning tank how long does it take to mature the water?

IF you are able to use a well seeded filter to ensure the bacteria maturity. The fry will do better in a tank that is mature with algae and muck rather than brand new and clean.

Q2.1 pH crash signs

Smell of water - unpleasant

Colour of the water

Fish may show signs of stress

Q2.2 How to stop a pH crash

Frequent water changes

Water to be buffered correctly

Good aeration

Q3. What are your recommendations for backup generators to consider.

Generators size and kWh rating.

Size of unit and noise it makes

Where you will be able to run it

Paul presented information on Koi Pheromones – Some main points included

- A pheromone is a secreted or excreted chemical factor that triggers a social response in members of the same species.
- Koi release pheromones into the water all the time.
- The pheromones in the pond tell the fish many things, such as who is ready to breed, who is sick, and most importantly, how crowded the pond is. If you keep the pheromone level low the fish will grow more.
- The easiest way to control pheromones is to conduct water changes.
- Can be removed by taking out dissolved organic compounds by skimming to waste as well as commercial products that claim to remove them. Potassium Permanganate is also said to react with and destroy pheromones.

Northern Branch Meeting Minutes Continued

And lots of discussion entailed during the break about the topic.

Des presented on sleeping sickness in Koi – Some key point from this talk was.

- Carp Edema Virus (CEV) - A large, double-stranded DNA virus thought to belong to the poxvirus family of viruses (family Poxviridae).
- Affects mostly fry and very young juvenile fish up to 1 year old
- Without treatment, the fish will slowly perish. Mortality rates up to 80 % are described
- Stress appears the most likely trigger
- The koi seem to fall asleep then will swim normally for a while, then fall asleep again
- Easily killed by doing a standard salt treatment at temperatures at least 30°C.

Allan asked how everyone's spawning have gone and most have had pretty good success with good hatch rates. Some problems as expected but all were pretty happy so far. Some more are still to be done. We will wait to see how they all turn out.

There were no fish for the table show, hopefully we will see some in the new year.

Congrats to Des, Joel & Tony H for winning the raffle

Chase the ace was attempted by Joel and Alex but it jackpots to \$750 next month.

The meeting was closed at 9.28pm

KSWA Southern Branch – November Meeting

Date: November 23, 2016

Attendance:

Apologies: Sharon Smith, Julia and Keith

Meeting opened 7.45 pm

It is with deep regret we learnt of the passing of one of our valuable members Sefan Pasznicki, our thoughts go out to Lisa and the family.

A few of our members attended the funeral thanks for that.

Just reminder to all. S.B. Members that there is a combined meeting with the N.B. Tuesday 13 December hope to see you all there.

There will be no meeting in January 2017 meetings will recommence on 22 February 2017.

Membership Drive will be on this Saturday 26 November at Woodavle Fish and Lily Farm 9am to 3 pm hope to see more members there to help and promote the Club, Jun our President will be your main contact.

Our annual KSWA Christmas Party this year will be at Shona's place. 4 December 2016 hope to see you all there details and address is published in the newsletter, BYO and bring a plate.

On a important note the Branch still does not have a Secretary so a volunteer is needed please, contact your committee if interested.

TREASURER REPORT \$2554.20 + \$50.00 deposit to be made. No accounts for payment.

SALES TABLE Jun has now fry powder available + smaller sized pellets available for your fingerlings.

FROM THE FLOOR

Discussion on feeding of Brine Shrimp shouldn't be more more than 2 weeks as the demand for more food continues as your fry grows.

Introduction of feeding fry powder to your hatchlings should commence after day 2 and no longer than 2 weeks as the demand for more food is required.

Info from our members regarding Spawning successes and not so was discussed we all wait with anticipation to see the rewards Good Luck!

Under 35 Competition. 1st Showa Tony Herbert Class A

2nd Showa Tony Herbert Class A

1st Kujaku Tony Herbert Class B Congratulations Tony

Raffle of the Christmas Hamper and goodies was drawn congratulations to the winners.

Presentation on Introducing Gin Rin into Doitsu was given by Iain McGregor it was very interesting and he bought along 4 Koi for us to look at, they were very pretty indeed. As Iain said this was 8 years in the making and we will now start to see the fruits of his labour. We thank Iain for making the effort in catching and bringing the Koi on the night.

S.B. Chairman Fred wished everyone a Merry Christmas and a Happy And Prosperous New Year.

Meeting was closed 9pm and we enjoyed our Christmas Drinks and eats thanks to all who bought a plate and made the night a success.

KSWA Sales Table

The sales table is an initiative of the KSWA to help members source quality pond and koi products at better than retail prices, a benefit of being a member of the club. All proceeds from the sales table are used as a fund raiser for the clubs needs. The Sales table is available at each branch meeting and some other club events. Please support your club by purchasing items through the sales table.

New stock of Koi & Fry food has been ordered. Available at KSWA meetings. Contact Jun on 0423 410 681 if you would like bulk food.

Portable DC Air Pump - 40L/min, 80L/min & 120L/min

Water Conditioners/Dechlorinator - 0.5L, 2.5L & 5L
Bacteria Clarifier - 85g

Koi Food (Ocra Quick Grow, Ocra What Germ & SEKERIN)
available in small and medium sizes + fry food - 1kg & 10kg bags

Koi Treatments

Koi Anti Parasite, Anti Ulcer, Anti Bacteria, Fungus Control etc

Miscellaneous

Koi 66 Variety poster & Illustrated Bible on Koi Keeping.

API Freshwater Test Kits - As Below



KOI SOCIETY OF WESTERN AUSTRALIA

Patron: Mr Michael Cave

Executive Committee of 2016 - 2

President	Jun Hua Guo	president@koiclubwa.com
Vice President	Des Howlett	
Secretary	Shona Macskasy	secretary@koiclubwa.com
Treasurer	Jocelle Co	treasurer@koiclubwa.com
Membership Officer	Ryan Witney	membership@koiclubwa.com
Sales Table	Jun Hua Guo	
Committee Member 1	Con Pismiris	
Committee Member 2	Brett Thomas	
Committee Member 3	Joel Bacich	
Committee Member 4	Fred Sharp	
Committee Member 5	Lina Tassone	

Non-committee positions

Newsletter Editor	Ryan Witney	editor@koiclubwa.com
Auction Master	Brett Thomas	
Logistics Officer	Brett Howlett	
Show Chairperson	Shona Macskasy	
Webmaster	Ryan Witney	

Northern Branch Committee

Chairman	Allan Bennett
Secretary	Brett Thomas
Treasurer	Ryan Witney
Membership	Ryan Witney
Tea & Coffee	Shona Macskasy

Southern Branch Committee

Chairman	Fred Sharp
Secretary	Con Pismiris
Treasurer	Vacant
Membership	Miki Mo
Tea & Coffee	Miki Mo



www.koiclubwa.com



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