

Richard Hughes, author of "Ruby & Sapphire", was the guestspeaker in a question and answer session on Saturday, 25th of June 2005

Alain: Okay people Richard is in the house

-Yey.be/Wallops-: received SVSNICK from Alain!~doos@84.24.180.138: Guest Richard

*: Guest is now known as Richard

MoDo: No one better be putting their finger in my chest! (with exceptions)

YG: Welcome Richard!

*: Alain gives channel operator status to Richard

Richard: Hi

africanuck: welcome richard

ux4: "

MoDo: Hello, Richard

Catrix: Good morning

YG: We appreciate you joining us. We are a pretty laid back group here

Annie: Hi Richard, welcome

YG: Been a while since we talked via email. Last time was when I was with USAA a few years ago

YG: We would like to open the floor up to you and perhaps you could fill us in on the latest

YG: in the world of rubies and sapphires...or any other topic

YG: Alain will be taking questions from the other link and posting here

Richard: Sorry for the delay. Just got back from Bangkok last night. Lots of diffused goods for sale there, still many denying that they are diffused.

Richard: Also picked up a bunch of flux-treated Verneuil synthetics.

YG: Are those being sold as natural?

Richard: Hi, Tay.

TayThyeSun: I am his student...

YG: Glad to have you, Tay.

Richard: The synthetics I bought as synthetic, but there is only one reason to make such a product.

YG: Richard, are the treatments having a great impact on the market price..like the hydro amethyst did on that market?

Richard: I also picked up some hydro synthetic ametrine. The beryllium diffusion has destroyed the price for all yellow and orange sapphire heated by other processes. Now the demand is for completely uncooked stones, which have increased in price.

Richard: Give my regards to Tay when you see him.

TayThyeSun: sure

Alain: Richard, Talking about regards, I needed to send them to from Vincent Pardieu and Peter Groenenboom

Richard: Thanks. Give my best to both of them. I think Vincent is now in Africa.

Alain: Yes in Madagascar

YG: Alain, what questions do you have for Richard?

Alain: Question from africanuck: Orange and Yellow sapphire...in your opinion, what is the percentage of diffused ones on the market these days?

Richard: Depends on the market. In Bangkok, it is over 90%. In the States, much much less.

*: Guest (~Guest@220.255.243.206) has joined #yg

*: lir (~lir@67.180.159.228) has joined #yg

Alain: Question from anatase: Is it still true that diffusion is a very surficial (about.5mm)?

*: lir has quit (lir)

Richard: Beryllium diffusion is not superficial, but depending on the length of treatment, can go completely through a gem. Titanium diffusion (blue) is superficial, chromium diffusion (red), even more so.

Alain: Question from JB: Are there any new detection techniques?

Richard: Not really. Most beryllium diffused stones can be detected by a yellow rim visible in immersion. The stones also show signs of high-temperature heating.

Richard: For yellow stones where the Be has diffused completely through, advanced testing (SIMS, ICP-MS or LIBS) is required.

Alain: So a normal gemologist could never make that call.

Alain: Question from anatase: Have any experiments been done with diffusion of magnesium, calcium, lithium, etc?

Richard: A normal gemologist can see signs of high-temp. heat treatment. But to confirm the ID, advanced testing is needed.

Richard: Some have experimented with diffusing other light elements, but there is really no point, as the color center created is the same and the beryllium diffuses much quicker. So why bother.

Alain: Question from TayThyeSun: how to identify heat treatment in clean rubies and sapphires

Richard: You basically can't.

Richard: But very few stones are clean.

Alain: That is pretty worrying, could you explain to us how you work on a diffused stone that comes into the lab

Richard: No different than any other stone. The main test is the microscope, in conjunction with a fiber-optic light and immersion in some cases.

Richard: We look for signs of heat alteration of inclusions, we look at the growth structures.

Richard: In some cases, the FTIR spectrum is also useful.

Alain: Question from TayThyeSun: on diffusion stones, what are the traffic lights that first clues you to begin tests in the direction of diffusion detection? I know I don't do immersion tests on all sapphires I come across

Richard: Anything in a yellow, orange or red-orange color is suspect. Then we look for signs of heat treatment. If the stone appears to be heated, we immerse it to look for signs of Be diffusion.

Alain: So ruby and sapphire give less headaches?

Richard: Yes, much less.

Alain: That is a relieve.

Alain: Question from MoDo: Don't the treaters understand they're only going to be hurting themselves if people become leary of buying these gemstones?

Richard: Since the Be diffusion appeared, a "Back to Nature" movement began. Now the demand is for completely untreated gems.

Alain: Question from ux4: If I have Rubies with 120/60 throughout +/-, no signs of heat under micro, immersion after thorough exam, is it safe to cert as untreated?

Richard: Generally, yes.

Alain: Lots of questions, must be nice with a jetlag.

Richard: It's okay. ;-)

Alain: Questions from africanuck: has the demand for untreated gems affected the prices of spinels and other gems that are not normally treated as well?

Richard: Not really.

Alain: africanuck is pretty nosy: When you go on buying trips, what equipment do you take?

Richard: My brain.

Richard: Seriously, I often don't even take a loupe, though I should.

Richard: But the most important piece of equipment is the brain.

Alain: You talked about the Verneuil synthetics you took home from your latest trip, could you fill us in on that topic.

Richard: Sometimes I take a loupe, tweezers, a dichroscope, an OPL spectroscope.

Richard: The Verneuil synthetics were both ruby and blue sapphire. They had been quench-cracked and then flux treated to make them look more natural.

Richard: Again, the only reason to perform such treatment is fraud.

Alain: Ofcourse.

*: ux4 has quit (Ping Timeout)

Alain: Question from anatase: Has your instinct always served you well, or have you ever really made a huge mistake?

*: ux4 (~ux4@70.144.222.237) has joined #yg

Richard: Instinct based on knowledge serves me well. But like everyone, I've made some big mistakes, especially when I was younger.

Alain: Which mistakes do you see fresh gemologist make noadays?

Richard: The same ones I made. Calling something synthetic when it's natural. Calling something treated when it's not. Over the years, I've learned to err on the side of natural, and that is a good lesson.

Richard: Too often gemologists are afraid of the dark. Thus they end up damning natural stones.

Alain: Overly cautious and made afraid by their tutors?

Richard: I don't know about their tutors. But gemology texts focus on the frauds, which makes everyone afraid.

Alain: Question from anatase: The sanctions against Burma are still to my knowledge in effect. Yet, a few days ago on Jewelry TV, they had a show featuring Burmese rubies. Has anything really changed with these sanctions?

Richard: The sanctions against Burma are in place, but they have been eased when it comes to gems. Any gem that is substantially processed in a third country (think flux-treated Mong Hsu rubies here) is now allowed in.

Alain: Richard, uptill now this has been a very steril chat .. would you like to update us on things that are occupying your mind lately, or would you like some more direct questioning?

Alain: Usually this is a very busy chitchat

Richard: In gemology, I am now focussing with John Koivula and the other AGTA lab staff in experiments involving the heat treatment of stones and the changes to inclusions.

africanuck: can we comment directly?

ux4: lol

Richard: It's okay with me.

africanuck: get ready for the floodgates to open :D

Richard: Shoot.

TayThyeSun: Richard, with the passing of Dr. Gubelin, do you have any idea when the Photoatlas books 2 and 3 are coming out?

Alain: Okay, people chitterchat away .. keep it fun and don't drive Richard nuts with too many questions at the same time

Richard: John is proofing them now. Volume 2 should be out in the Fall. Volume three a few months later. I've seen the page proofs. These are gonna be fantastic volumes.

TayThyeSun: (I don't like the cost of the books, maybe suggest to them to do what you did with your landmark book)

Alain: Quality doesn't come cheap.

africanuck: Richard, we had a corundum chat a few weeks ago, and there was one question that we didn't get an answer to. The difference in rutile needles (length and thickness), is it due to the rate of cooling or the amount of rutile present?

Richard: I've made that suggestion, but it's too late. They will be expensive, but well worth the price.

TayThyeSun: maybe I'll just stick to borrowing from Tay when I need them haha

Richard: Like all crystals, the perfection depends on the growth conditions. Slower cooling favors bigger, more perfect crystals.

Richard: Do yourself a favor and save your money now for the books. You'll be glad you did when you see them. They are spectacular.

TayThyeSun: I trust you

TayThyeSun: for rubies, many are quite heavily treated with lead glass(not too tough to detect in a lab, but what about in the field??), and is avoiding burnt rubies the only way to avoid buying HTLE goods? I know most rubies have to be burnt, so it doesn't sound good

ux4: Pala: your work there made me a believer. Prices are high, my cut low, but I encourage my clients for quality and certainty to shop there because of reliability, reputation. Still the best bet? are there others?

Richard: I should note that yellow sapphires from Sri Lanka often have imperfectly formed silk. Many times you see just particles. Some gemologists misinterpret this to mean the stone is heated, when it was not.

Alain: Can we distinguish between the two or just keep that info in the back of our head?

africanuck: why would that affect only yellow sapphires?

TayThyeSun: so to avoid that problem, we observe further at higher magnification?

Richard: Quality always costs more, but you never have remorse about buying quality.

ux4: agreed

Richard: The glass-treated rubies are easy to ID with a microscope or loupe. Most are big stones from Madagascar.

TayThyeSun: Richard, I saw some of your articles on using fluorescence to detect heat treatment, can you elaborate on that technique, and is it diagnostic?

Richard: Generally it is diagnostic, but with a couple exceptions. Some untreated pads from Sri Lanka may show a chalky fluorescence in areas where there are milky texture clouds. But otherwise, it's a great technique. And I should say that if you do not receive the AGTA lab alerts, please sign up at <http://www.agta.org>.

ux4: (ty 'tase)

anatase: I have heard you describe Fallbrook, CA as the Idar-Oberstein of the US. Is there really that much gem action there?

Richard: It is a town of just 40,000 people, but there are a number of major gem and mineral dealers here. Not on the scale of Idar, but still remarkable for such a small town. Mostly due to Bill Larson, who over the years brought many people in.

Alain: Richard, am I correct in saying that your book is almost sold out?

Richard: Yes, I have less than 100 copies left.

africanuck: will you be reissuing it?

Richard: I am working, albeit slowly, on a new edition.

ux4: What about Pad-like spinels - any brewing interest there?

Richard: Yes, these stones which come from East Africa, are quite lovely.

TayThyeSun: another thing, what is the scientific mechanism behind the Be treatment that causes the colour change? the latest I follow is that it functions as a catalyst, but not as a chromophore. any advances in this theory to date?

TayThyeSun: will you be including a chapter of this in a new press of your book?

Richard: This subject was explored thoroughly in the article that appeared in the Summer 2003 issue of Gems & Gemology.

Alain: And I believe in one of the latest AGTA articles.

TayThyeSun: so it is confirmed?

JB: What country is currently producing the most gem corundum?

Richard: Basically, Be creates a trapped hole color center. The creation of this color center is dependent on many things, including the amount of titanium nearby.

Richard: If you have not read this article, get a copy and read it. The work done by John Emmett in this article has radically redefined our understanding of color in not just corundum but in all gems.

TayThyeSun: so the effect of Be diffusion varies greatly with the stones from different countries

TayThyeSun: I'll get my hands on it

Richard: Most gem corundum today comes from Sri Lanka and Madagascar.

MoDo: Richard, I own your book and enjoy the photos very much :-). Any chance of printing a more newbie-friendly edition? (Was that a dumb question, YG?)

Richard: Again, please read the article. It is one of the most important to appear in decades. It will completely change the way you think of color.

ux4: TY!

Richard: I don't currently have any plans for a simpler edition.

MoDo: Okay, I know, study harder!

Alain: Richard, could you give us a global picture in ruby pricing.

Richard: I'll do that as I explain the meaning of life :-)

ux4: lol

Alain: I saw that one coming :)

ux4: I have seen Pads.

africanuck: How much production of those gorgeous neon pink Namya spinels is there currently?

Richard: Not a lot. I was in Nanyazeik last September and there was not much production.

africanuck: Are there other "neon" colours coming out of there too?

Richard: They get some marvelous, slightly magenta rubies also.

ux4: i use your pic on about page 398(?) of you book as my definition of Lotus color. Did you intend this?

TayThyeSun: what is the current trade demand on tanzanite and tsavorite? I heard the mines dried for tsavorite, can you confirm it?

Richard: yes, but remember that pad is a range of colors, not just one.

ux4: TY

Frank: Why do the Montana sapphires get so little attention outside the US?

Richard: I don't know the current production of tsavorite. Tanzanite continues to be produced and demand is high.

TayThyeSun: those block D colour?

Alain: What are you personal feelings towards Tanzanite?

Richard: Montana sapphires get little attention because they are small and not so richly colored.

ux4: (Tsavo prices are down in US)

africanuck: I was just typing that Doos

Alain: heh

africanuck: where is classy carat now?

TayThyeSun: (thanks Ux, nice info)

Richard: I like tanzanite. I don't know the color differences in the different blocks, if any.

TayThyeSun: humm

anatase: What's up with that pricing cartel? Tanzanite One is it?

Alain: I personally love the color, but don't you think it's more marketing than gem?

Richard: Yes, Tanzanite One. They are the biggest player.

ux4: i vote gem

africanuck: I vote Dem, LOL

Richard: No, I don't think it's just marketing. It is a lovely gem.

ux4: lol

africanuck: well, if I wasn't a canuck

anatase: Have they been successful in offering rough lots, sight unseen?

Richard: Please, come to America, vote early, vote often.

TayThyeSun: tanzanites just have a nicer colour than sapphire (kill me for saying that)

MoDo: That's the Dem way!

Richard: That's the only way the world will be at peace.

*: TayThyeSun is now known as hehhehhehheh

africanuck: I love the colour of Tanzanite

JB: Has the world political climate made your travel's more difficult?

Richard: Don't know about their rough offerings.

MoDo: I'm holding on to mine; they're very nice to look at!

africanuck: I'm not even going to touch that one MoDo

hehhehhehheh: Richard, how's the demand on Jadeite in the USA?

africanuck: LOL

hehhehhehheh: am I off topic?

Richard: I still go mostly where I want, but yes, Dubya has completely screwed up much of the world.

Richard: The demand for jadeite is not much in the US.

ux4: On Tanzy: maybe marketing, but market demand seems high, with very little marketing in my area. Sell themselves on viewing.

hehhehhehheh: Richard, what happened to the ruby market after Songea threw tonnes on the market?

Richard: Songea never produced fine ruby, so had no effect.

MoDo: I have some small Songea stones. Nice but not great

hehhehhehheh: but a lot of the Be stuff comes from there isn't it?

hehhehhehheh: and then gets mixed into stone parcels

hehhehhehheh: good job

ux4: Pads: what is %color split and saturation of best gem quality?

Richard: On the % color split, it's impossible to generalize.

ux4: ty

hehhehhehheh: Richard, how would you compare the FGA, GIA and the AIGS courses?

Richard: All are good, each has a slightly different focus.

hehhehhehheh: and what are the focus?

Richard: GIA is focussed on diamonds, FGA on pure gemology, AIGS on colored stones and gemology.

Richard: Yes, but gemology is something best learned firsthand.

hehhehhehheh: it is tough learning it away from the gemtrade centre

hehhehhehheh: lab gemmology is so different from field gemmology

Frank: Richard....how would you advise a new gemologist to proceed to gain first hand experience?

Richard: I would suggest you take a bit of money, by a few things and then start to sell them.

Catrix: anyway I got a kid to take care of,, thank you Mr, Hughes I enjoyrd the chat and hope to get your book

Richard: That's how you learn, by making mistakes. Just buy small in the beginning.

Annie: Richard, thank you for the very informative evening,,

*: Catrix has quit (Catrix)

Richard: All the best, Catrix.

Annie: much appreciated

Richard: Thanks to all of you. Lot's of fun!

Frank: Buying is easy ...where do you reccomend selling?

*: Richard has quit (Richard)