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The S A Gem and Mineral Club

Associated Member of **FOSAGAMS**
13 Bathurst Crescent, Taybank, PE South Africa, 6025

Chairman: Reinhardt van Vuuren: Cell: 0742408053 sagemclubpe@gmail.com

Secretary: Angie van Vuuren: Cell: 0748874557 sagemclubpe@gmail.com

Phone calls preferably after 17:00 weekdays

NEWSLETTER - JUNE 2014

SUBS ARE NOW DUE

R130.00 PER INDIVIDUAL, R150.00 FOR FAMILY AND
R60 STUDENT

Payment can be made at the next Club meeting or

By Direct Deposit or by EFT into the Club's Savings Account:

SA GEM & MINERAL CLUB ABSA BANK Greenacres Branch

Branch Code 632-005 Savings Account No 380 3157 1933

PLEASE USE YOUR SURNAME AS REFERENCE FOR

DEPOSIT AND ADVISE THE TREASURER, DONAE' 0837735222

LAST CLUB MEETING : Thursday 29th May 2014 at the Conference Room, St Saviour's Church Hall, Cnr Villiers Road and 1st Avenue Walmer at 7:30pm. There was a total of 9 members present. Reinhardt welcomed everyone to the meeting.



Members were then challenged to a gem stone identification quiz, whereby gems were passed along for members to identify. Several members achieved full marks and the rest also did very well.

On the left are the gems that had to be identified by the members in the challenge: Snowflake Obsidian, Petrified Wood, Calcite, Rhodocrosite, Agate, Coral, Amber, Malakite, Garnet and Blue Chalcedony.

Derek Scotney then proceeded to show us a bag of granite samples from Evans and Sons and gave us a brief explanation of each. He also explained the processes that they use to cut and polish the tombstones.

The members then spent some time looking at a variety of Emeralds and Agates and various other items on display and enjoyed some tea and cake.

We also want to wish two members a speedy recovery, Naas Rademeyer who is in ICU in Bloemfontein and Jenny Reuter who had a hand operation.

ANNUAL BRAAI : It's that time of the year again for our Bring and Braai on 29th June 2014, 12 o'clock at Eline Capel's house at 2 Clive Avenue, Bluewater Bay. Remember to bring your food and drinks and a fold up chair and table if you have otherwise we will make a plan. Looking forward to seeing you there.

NEXT MEETING : Our next meeting will be held on the 26th of June 2014, at the Conference Room, St Saviour's Church Hall, Cnr Villiers Road and 1st Avenue, Walmer, at 7.30pm. The birthstones for June are Pearl, Moonstone and Alexanderite. Members are asked to bring examples of these, members are also encouraged to bring any items with mother of pearl. Our guest speaker will be Nicolette Kerspays who is a Manageress at a local Jewellery store and will address us on the subject of Pearls.

Alexandrite is one of the rarest of all coloured gemstones available today. More specifically, it is an extremely rare colour change variety of Chrysoberyl (a cyclosilicate). Despite its name, Chrysoberyl, which is an aluminate of Beryllium, does not actually belong to the Beryl mineral group, but rather, it is classified as its own independent mineral group. The history of Alexandrite is quite controversial, dating back to the times of Imperial Russia. It is said that the stone was named after the Russian tsar, Alexander II (1818 - 1881), but was discovered by a French mineralist called Nils Gustaf Nordenskiöld (1792 - 1866). When Nordenskiöld first discovered Alexandrite in 1834, it was initially thought to be an emerald because it was discovered in emerald mines located in Russia's Ural region, near the Tokovaya River. The specimen was later identified as a chromium bearing, colour change variety of Chrysoberyl. Legends claim that the discovery of alexandrite was made on the very day the future tsar of Russia became of age. Inevitably, the red and green colour change stone was to be declared the official gemstone of Imperial Russia's Tsardom. The colour change phenomenon seen in Alexandrite is referred to as the 'Alexandrite effect'. The change in colour can be observed under certain lighting conditions, typically under daylight and incandescent lighting. Alexandrite is also a strongly pleochroic gem. It can display emerald green, red, orange and yellow colours depending on which angle the stone is viewed from. The pleochroic properties of Alexandrite are completely independent from its unique colour change ability. Typically, Alexandrite exhibits an Emerald-green colour in daylight, and raspberry-red under incandescent lighting. Alexandrite can also occur with yellowish and pink colours, and extremely rare specimens can exhibit chatoyancy (cat's eye) effects when cut en cabochon. The colour change 'Alexandrite effect' is a result of the strong absorption of light in the yellow and blue portions of the colour spectrum. The original source for Alexandrite was in the Ural region of Russia, but these mines have long been depleted. For quite some time, the worked out mines of the Urals were thought to have been the only source for large alexandrite stones, specifically specimens weighing 5 carats or more, but very recently in 1987, large specimens were discovered in Minas Gerais, Brazil. Other sources for Alexandrite include Myanmar (Burma), Sri Lanka, Tanzania and India. Alexandrite gemstones are typically untreated, but imitation stones do exist. Occasionally, alexandrite stones may be dyed or oiled, but this is not very common. Many Alexandrites are synthetic (lab-grown) and others may be natural 'simulated' gemstones, such as colour change Garnet, Sapphire or Spinel. Many lab-grown (synthetic) alexandrite stones are actually Corundum (Ruby / Sapphire) that has been laced or infused with either chromium or vanadium to provide colour. It is very expensive to create synthetic Alexandrite,



so even lab-grown stones can be very costly. Synthetic Alexandrite has been available on the market since the 1960's.



IMA 2009
Alexandrite Gemstone Encyclopedia & Jewelry Collector Guide

Why does alexandrite appear to change color in sunlight and artificial light?



Candlelight

Fig. 13: Incandescent lighting contains a higher balance of red light and alexandrite appears red to the human eye.



Mixed light

Fig. 14: Alexandrite effect phenomenon of an observed color change from greenish to reddish with a change in source illumination.



Daylight

Fig. 15: Daylight contains high proportions of blue and green light and the stone appears green to the human eye.

www.alexandrite.net