



Est. 1954

The S A Gem and Mineral Club

Associated Member of **FOSAGAMS**
34 Heath Street, Sydenham, Port Elizabeth 6001

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

October 2014 NEWSLETTER

LAST CLUB MEETING : Thursday 25th September 2014 at the Conference Room, St Saviour's Church Hall, Cnr Villiers Road and 1st Avenue Walmer at 7:30pm. We had a total of 8 members. We watched part 2 of Into The Lost Crystal Caves of Mexico. The night commenced with lovely cake and tea/coffee and of course lots of interesting conversation.

SUNDAY LUNCH : Thanks to Gill and Collin Towers for arranging a fabulous afternoon with our guests Linda Stone from FOSAGAMS, Sandra Steward and our club members at Blue Waters Cafe on 5th October 2014. Linda donated two books to the Club on the Algoa Bay region as a gift to the club for it's birthday, much appreciated.



WORKSHOP : The workshop is officially operational at 34 Heath Street, Sydenham. We welcome members to attend workshop every Saturday afternoon between 2pm and 5pm. This Saturday the 18th October 2014 Colin Towers will be on workshop duty as Reinhardt and Angie will be away.

SA GEM CUTTING CHALLENGE : Make use of the workshop and submit 'what could be' the winning Cabochon. Our Club members have done very well in the past. The competition is open to all. Entries need to be in by the 22nd of November 2014.

NEXT MEETING : 30th October 2014, at the Conference Room, St Saviour's Church Hall, Cnr Villiers Road and 1st Avenue, Walmer, at 7.30pm.

The Birthstone for October is Opal, Tourmaline and Jasper. Feel free to bring examples of these as well as any other interesting items for display.

THE CLUB'S 60TH ANNIVERSARY : On the 29th November 1954 the Club was founded. We will be combining this celebration together with our year end Christmas function on Sunday the 30th November 2014. More about this will be discussed at the next meeting and will be noted in the November Newsletter.

Opal

Opal is a gem-quality form of hydrated amorphous silicon dioxide. Its name is derived from the Sanskrit word for 'stone'. It is gemologically classed as a mineraloid rather than a mineral, owing to its amorphous form. Opal is considered to be the national gemstone for Australia, owing to the fact that Australia produces roughly 97% of the world's entire supply of opal gemstones. Opals can be divided into three main subgroups: precious opal, fire opal and common opal (potch).

Opal is famed for its ability to diffract light. The exact cause of opal's unique properties was only recently discovered by Australian scientists in the 1960s after analysis with electron microscopes. It was discovered that small spheres of silica gel caused interference, refraction and diffraction of light, resulting in opal's distinctive play of colour. The varying refractive indices of the spheres and spaces between them dissect the light on its passage through the stone. As light enters the opal, it bends around the tiny particles or 'spheres' of hydrated silica, as well as 'chips' of silicon and oxygen suspended within the stone. Light is comprised of all visible colours and can produce an entire spectrum of colours when it is diffracted.

Precious opal is known for its remarkable ability to diffract light, which results in rainbow-like colours that change with the angle of observation - known as 'play of colour'. Fire opal can sometimes exhibit slight colour play, but it is better known for its vivid body colour. Common opal is usually opaque, rarely translucent, and lacks play of colour. It is often found mixed with other gemstones, such as agate opal or moss opal. Common opal is known to exhibit 'opalescence'. The term 'opalescence' is often mistaken for 'play of colour'. Opalescence should technically only be used to describe the optical effects seen in common opal. Opalescence is caused by the reflection of light and appears as a sheen of light, typically milky-bluish in colour. It is a form of adularescence, whereas 'play of colour' is iridescence caused by light diffraction.

Opal by definition is hydrated silicon dioxide, always containing from three to thirty percent water. This characteristic and its relative softness with a rating of 5.5 to 6.5 makes opal quite easy to identify and distinguish from other gemstones. Unlike other gems with play of color or iridescent effects, opal also exhibits 'opalescence'. Other iridescent stones do not display this pearl-like bluish color effect that appears to glide across opal, but instead, will usually show color that will abruptly appear, disappear and then reappear, depending on the viewing angle. In most cases, close observance of color and optical phenomena can usually help distinguish opal from other similar gemstones.

