

JULY 2019

DISCOVERY

NASA's Cassini spacecraft spectacularly crashed into the ringed giant Saturn on September 15, 2017, after 20 years in space. And yet, two years later, astronomers are still making groundbreaking discoveries in Cassini's treasure trove of collected data. A new paper published 13 June '19 in Science describes results from four Cassini instruments taking their closest-ever observations of the main rings.

Findings include fine details of features sculpted by masses embedded within the rings. Textures and patterns, from clumpy to strawlike, pop out of the images, raising questions about the interactions that shaped them. New maps reveal how colors, chemistry and temperature change across the rings.

Like a planet under construction inside a disk of protoplanetary material, tiny moons embedded in Saturn's rings (named A through G, in order of their discovery) interact with the particles around them. In that way, the paper provides further evidence that the rings are a window into the astrophysical disk processes that shape our solar system.



Did You Know?

Unlike any other animals in the world, male seahorses become pregnant. Females insert their eggs through an oviduct into the male's brood pouch. The male wiggles to get the eggs into position. Once all the eggs are inserted, the male goes to a nearby coral or seaweed and grabs on with his tail to wait out gestation, which may last several weeks. When it's time to give birth, he'll contort his body in contractions, until the young are born, sometimes over a period of minutes or hours.

ASTRONOMY

We are now seeking enrolments for our third term U3A course DISCOVERING ASTRONOMY commencing in July.

The course will trace the progress of our knowledge from prehistoric times through to the Space Age. It will show the struggle we have had to shake off ignorance and superstition, to reach our present understanding. It will emphasize how much we have still to learn.

Our sessions always include a segment on what is currently happening in the sky, as never a week goes by without something new to consider or observe. By way of example the cyclonic storm observed for the last 350 years in Jupiter's atmosphere known as the Great Red Spot, appears to be now shrinking and we don't know why. Even a small backyard telescope will reveal it.

Our sessions are held every Monday at 2pm. in Room 1 of the Coffs Community Village.

For more information call 66532742 or email <winhoward@iprimus.com.au>

Win Howard.

QUIZ

- 1 In which country was Rudyard Kipling born?
- 2 What did the crocodile swallow in Peter Pan?
- 3 Arrange the letters of the word 'allergy' to form three other seven-letter words.
- 4 What was the name of the surgeon who performed the first successful transplant of a human heart?
- 5 Who was the first woman to ride a Melbourne Cup Winner?



Light Hearted Enjoyment of Music

This class which commenced in Term 2 is held the second and fourth Wednesday in the month from 10am to 12md at a private residence in Woolgoolga.

The class covers music from light classical (Beethoven, Bach, Johann Strauss) to many and varied kinds of jazz and the big band era up to the 1970s Towards the end of the session, we play an assortment of music which brings back memories.

Each session has a short feature on different instruments from various sections of the symphony orchestras (strings, percussion, etc.) as well as modern instruments such as saxophone, pedal steel guitar and bluegrass instruments (banjo, mandolin, dulcimer, etc.). In future I am hoping to source various players who will be able to demonstrate their instruments.

There are vacancies for the remaining terms in 2019 and more members would be most welcome, come and join the class, to see if it is for you.

Please contact me if you have any questions.

George Gordon Ph 6653 2345 or 0447 532 344

Email georgegordon6@bigpond.com



Submitted by Gislane Imbert

Answers to Quiz

- 1 India
- 2 An alarm clock
- 3 gallery, regally, largely
- 4 Christian Barnard, a South African surgeon
- 5 Michelle Payne

Sawtell Art Group "Masters" Exhibition

Saturday 22 June saw the opening of the above exhibition. Members chose a "Master" artist and entered a work simulating the artist. Two members of our Wednesday Mixed Media class entered. Here is their work. Also Rhonda won the raffle! How good is that!



Profomo del Mattino (Berger) Rhonda Mair



The Station Boundary (Fulwood) Lucy Johnston

Uzbekistan - No 2 in a 3 Country Trip

We crossed into Uzbekistan easily for me, as Australians don't need a visa, and were met by our guide and driver. Our first stop was Tashkent the capital. The people were different from Tajikistan, more casual, many dressed in Western clothes, there were tour groups, we saw no "western" tourists. There are a lot of Koreans and of course Russians. I researched and found the reasons for Koreans being in Uzbekistan, very interesting.

We were taken on the metro, opened in 1977. What an experience, each station was like a ballroom. They were designed to double as bunkers and as military installations, no photography was allowed until 2018. I was impressed with the war memorial, an eternal flame burning in a beautiful park. The names of the dead, their date of birth and death recorded in big bronze books. Like many countries, some of them were very young and some died in the last days of the war. Uzbekistan lost 550,000 people, soldiers and civilians in WW2, out of a population of only 6,550,000.

Uzbekistan is a Muslim country, and since Independence, practice their faith but I would say they are moderates. The older men wear small caps, older women particularly, do observe a dress code of long sleeves, scarves and legs covered by long dresses and leggings.

Uzbekistan was also invaded by Alexander the Great and Genghis Khan. Uzbekistan has many beautiful old mosques and madrasa which have been partially or completely restored and are listed by UNESCO. Some of the restored mosques are also still used for prayers.

We visited all the famous cities, they all had old city walls, old mosques, madras, mausoleums, museums, harems (empty of course) and old forts. We enjoyed the restaurants, we could buy local wine, beer and vodka very cheaply. The shopping for souvenirs was great, lots of lovely hand made things.

We had a guide and a driver each day and our accommodation was usually within walking distance of the sights. At night, the cities are lit up with coloured lights and the families are out together, just walking or eating in the restaurants. The people were friendly and seemed happy. Their President's picture was also displayed on buildings. A highlight of our trip was spending a night in a yurt out in the desert near an ancient fort. Heidi and I shared a yurt for sleeping and there was a

communal yurt for meals. The desert was magic and we saw many camels (though someone did own them). Whilst in the desert, we explored many old forts built maybe 500BC. They were built of mud bricks and then covered with mud.

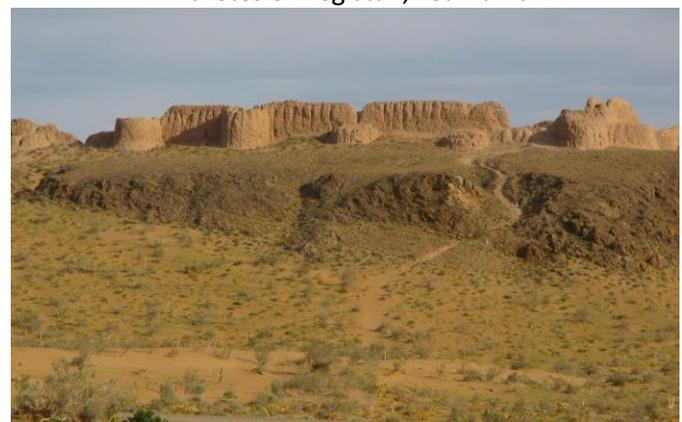
There were so many fascinating things to see, I can't cover them all here. Would I recommend a visit? Yes, definitely. Karen Baff



Mustakillik Maydoni Metro Station Tashkent



Minaretes of Registan, Samarkan



Ancient Fort in the desert north east of Khiv