

## Eclipse over Egypt, by Ernie Piini

### Eclipse Day

On the morning of March 29, 2006, at 1:30 A.M., three busloads of eclipse chasers and spectators set off for a four-hour ride from the Charm Life hotel in El 'Alamein, Egypt, and headed West to our destination, El-Sallum Matrouh, a restricted area just 4 km east of the Libyan border. This area had been set up by the Egyptian authority especially for our safety and comfort. Security was tight and our bus had to be inside the restricted area by 6:00 A.M. or find some other place to set up our telescopes.

Fog covered most of the hills surrounding this vast campsite when we arrived. Flags flapping from the strong winds in the area forebode gloom. Worse yet, it had rained heavily the day before and several busses were stuck up to their axles in mud.

There must have been several hundred busses in the area where the Egyptians had raised several large tents. Inside, many tables and red fabric draped chairs were set up on large rugs which covered the ground. Restrooms were conveniently near. Along with the estimated 17,000 viewers, Egyptian President Hosni Mubarak made an appearance. Two yellow helicopters circled overhead for his personal security.



Fortunately the fog cleared by 10 A.M., the wind died down, and only pure blue skies remained. My daughter Elaine and I selected a site behind a row of tents facing the southern hills and got busy setting up my 3-Way telescope. I filled the shipping crate with rocks from nearby piles, set the crate upright, and mounted the telescope on top. This then became a solid base from which to film and record the eclipse.

My primary experiment for this eclipse was to assess the results from my new Canon "Rebel" digital camera. I mounted it in series with new coronal streamer filters, which I had modified especially for this eclipse. The streamer filters act like darkroom dodging tools which help eliminate much of the strong inner corona and emphasize the outer streamers. Elaine operated my Canon GL-1 camcorder riding piggyback on the telescope.

When checking out the optical alignment of my telescope I realized it was badly disturbed, probably from the jostling of the morning's long bus ride. I adjusted it as best I could but it was still well out of alignment. After I had returned home I found the diagonal mirror mount had come loose—a delicate job to correct, and something which takes time to adjust—not something to be done in the field.

The moon began its first bite of the sun at 11:20:06 A.M. The excitement in our area increased, knowing that this eclipse would occur unimpeded! Elaine recorded the temperature and humidity every 10 minutes and took 10-second videos. I had my Dry - Wet bulb thermometer mounted on the shady side of my crate, as I have for each of the 26 eclipse adventures I have attended since 1970. As the crescent shape of the sun became more and more prominent, I noticed that my digital screen was showing double images telling me my optical alignment was still bad, so I spent some time finding an area on my screen that would help correct some of this problem.

Screams from the huge crowd signaled the arrival of totality at 12:38:01 P.M. Camera shutters sounded like machine guns. People yelled out the names as they discovered the various

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planets and brighter stars shining in the dark skies above. The 360-degree horizon shone with a red-orangish hue as the dark moon above highlighted the eclipsed sun and its awesome corona. You had to be there to fully appreciate this beautiful force of nature.

My initial photo exposures through the coronal streamer filters were mostly bad, so I removed them and settled for unfiltered exposures. The camcorder view screen provided a continuous and grand view of the eclipsed sun, its Bailey's Beads, rosy colored prominences, and that awesome corona. Elaine used a remote controlled zoom function to expand or decrease our view of the corona. Awed Egyptian security guards came over to watch with us and enjoy this rare sight.



*Corona with streamers.*

The show became history at 12:41:59 P.M. after lasting a good four minutes. This time is considered lengthy when compared with many eclipses which last only a few seconds. Rare ones last up to seven minutes, with 7.5 minutes being the maximum duration when the sun-moon alignment is optimum. Some eclipses are rained out or clouded over.



*Elaine's diamond sparkler at  
3rd contact.*

Normally, I begin dismantling my telescope shortly after 3rd contact but Elaine was having so much fun with the camcorder that we kept all operations going until the moon cleared the sun at 1:59:52 P.M.

Our meteorology results showed a dry bulb temperature drop of 6 degrees, from 70 down to 64 degrees Fahrenheit, due to the shade caused by the eclipsed sun. The humidity measurements were of more interest. The reading at 10:12 A.M. was a high 90%—since the ground was still damp from the rain of the day before. As the morning progressed, the sun dried the air down to

70% at 12:20 P.M., 10 minutes before totality. The humidity then rose again because of the lack of sunshine as the moon eclipsed the sun. The humidity increased to 78% at 1:03 P.M. but afterwards returned to 70% and towards a normal desert dryness.

### Around Egypt

Remember the song lyrics “see the pyramids along the Nile”? Well we did all that. Besides the awesome eclipse just described, we were treated to many of the wonders of the pharonic land of Ancient Egypt. Beginning with the fabulous Egyptian Museum in Cairo, where we saw close-up the treasures of King Tutankhamen discovered in 1922 by Howard Carter, the English archaeologist. In the afternoon we walked the grounds of the remarkable Pyramids of Giza. They were burial tombs built for kings; the largest, 450-ft tall, for King Khufu (Cheops); next in size, for his son Khafre (Chephren); and the smaller 203 foot pyramid of the three, for Chephren's successor, Menkaure (Mycerinus). Cheops pyramid was built with around 2.3 million lime stone blocks, each weighing an average 2.75 tons, a total of 6.8 million tons. My question is why did they build them so close to the city? And furthermore, if I were an Egyptian king I'd build my pyramid on top of Cheops so that I would have a better view of Cairo.

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The last stop of the day we visited the famous Sphinx. Just below the face, barricades had been erected to make repairs. The sun setting directly in back made photography a bit of a challenge. The Sphinx is better viewed in the morning.

I always wanted to see Alexandria, Cleopatra's hometown, and its new National Library; and also the amazing Roman amphitheater, buried for centuries—found by accident during construction of a railroad only 30 years ago. We saw where the fabled Pharos lighthouse once stood just offshore from the modern city of Alexandria in Egypt, one of the Seven Wonders of the Ancient World. It had fallen into the adjacent sea and, too, was recovered only recently. The PBS Nova program, "Treasures of the Sunken City," described its find.



Our 5-star hotel at El 'Alamein, the Charm Life, was a real treat. It faces the beautiful coast line of the Mediterranean. This infinitely beautiful sea and white desert sands blend gracefully under its transparent, multicolored blue waters. Its location was conveniently east of the eclipse site near the W.W.II battleground of El 'Alamein. Here is where German general Erwin Rommel and British commander Bernard "Monty" Montgomery did furious battle in armored tanks in this desert country. A well designed museum and outdoor display of war machines commemorate this historic site. An English Spitfire airplane, propeller blades bent from a crash, pancake landing, sits atop a frail 4-wheel stand which substitutes for its landing gear.

Here three separate cemeteries honor the war dead. The British cemetery has rows upon rows of 3-foot tall markers, a final resting place for over 7,000 English soldiers. In the center is a monument where, just days earlier, Prince Charles and his wife, Camilla had placed a wreath. Several miles away, a German Memorial contains inside its walls the engraved names of their fallen soldiers. Further down the road is the Italian Memorial. Their design is awesome with walls and rooms containing separate crypts for their dead and marble faceplates with names engraved. Many were engraved with the word 'Ignota', meaning unknown.



*In Grateful and Everlasting  
Memory, Charles & Camilla,  
2006.*

Further south along the Nile, Karnak and the similar but smaller Luxor gave us numerous photo opportunities. The ancient Pharoes adorned their temples with huge pillars and statues. Common were the roofs resting on rows of giant pillars called hypostyle. I photographed almost every square inch of several temples. Their sandstone carvings and paintings of Egyptian figures, mostly in profile, seldom a face-on view,



*Ernie & Elaine near the  
entrance to King Tut's tomb.*

accompanied with lots of Egyptian hieroglyphics were something to ponder. Their statues of stone were huge. Out in front you are greeted by rows of lion or ram figures.

From Karnak we crossed the Nile to our next stop, the Valley of the Kings. Sixty-two tombs lie in the sandy hillsides. We walked down the steps into the tombs of Rameses III and IV and most of all, King Tut's tomb. The tomb of this 18th Dynasty pharaoh was covered with glass and his mummy was covered with his inner

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funerary casket. I remembered well the painting on the back wall from the many books I have read.

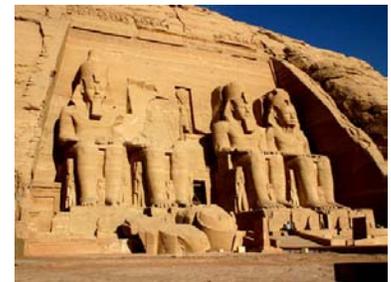
We visited the Valley of the Queens. Of major interest to me here was seeing the three free-standing terraced funerary temples of the woman pharaoh, Queen Hatshepsut. On the way back we saw Howard Carter's home on a hilltop and later, the Colossi of Mennon, two 64 foot tall sitting statues that once guarded the temple of Amenophis III (18th Dynasty) were now placed peacefully amid a sugarcane field.



*Newly discovered tomb.*

After all this we boarded the cruise ship M/S Nile Plaza for a 4-day pleasure ride down the Nile river. This was the trip of all trips. We cruised slowly past villages, seeing river life, water pumps in operation feeding small farms along the Nile, seeing other temples perched on the hilltops, and most of all seeing the many minarets at sunset, with chanters calling the Muslim faithful to prayer. Some of the minarets were lined with flashing colored lights. This I will never forget as well of the beauty of the colorful, far off sandy hills with black trees in the foreground. An interesting event was watching the boat being lifted up at the Esna Lock, about a 20 foot rise into a dammed up part of the Nile.

We later stopped near the Aswan Dam and the next morning rose early for a 25-minute flight to Abu Simbel to visit the temples of Harakhte and Hethor that once were about to be lost to the rising waters of Lake Nasser. In 1965 UNESCO stepped in to help save the two huge complexes. The temples were hand-sawn into 1,050 blocks, moved, and rebuilt block-by-block on an artificial hill, 680 feet from and 200 feet higher than their original site. Each temple features the 65-ft high statues of Ramses II and his wife, Nefertari (19th Dynasty).



*Elaine stands where the Holy Family may have walked.*

We left our ship and the Nile the morning of our final day and flew back to Cairo. There we visited the spectacular Citadel, perched high on a hill, which contains the Mosque of Muhammad Ali (not the boxer). The Citadel features seven alabaster domes and has the tallest minaret in the world. Later we visited the Coptic Church of Santa Barbara. It is here where the holy family hid during the hunt by King Herod the Great. Maybe we walked in the footsteps of Jesus?



Later we saw the Step Pyramids of Saqqara. They were built around 2650 B.C. before the giant pyramids of Giza. The tallest stood only 204 feet high but known as the largest stone building in the world.

On our last evening in Cairo, Elaine and I relaxed on the balcony of



*Step Pyramid of Saqqara.*

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our fifth-story room. We could see part of the Chephren Pyramid back lighted by the setting sun. We could see jaywalking Egyptians, dangerously challenging six lanes of noisy traffic on Pyramid Road below. Nobody was hit but our guide Tarik told us they lose an average of 7,000 people per year.

In closing, we thoroughly enjoyed this trip. Many thanks to Jen and Vic Winters of Astronomical Tours who organized it. We had signed up two years earlier to participate in a similar trip to view the Transit of Venus from Egypt but had to cancel when I had a serious accident, throwing my hip out of its socket while trying to pick up the morning paper. Since then I take every step very cautiously. My dream of seeing the 'pyramids along the Nile' finally came true!

Many thanks to my long time friends, Joe Heim and May Coon, for once again reviewing my text. Also, I would like to thank our tour guides, Tarik and Zee Zee and our fill in guide Oliver 'www.Klipsi.com' Staiger from Geneva, Switzerland. Much of my knowledge of Egypt was derived from *Fodor's Exploring Egypt* booklet.