
Xanadu_1

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Xanadu. The name describes two places which instill a deep sense of wonder in our minds. Two places that have generated equal amounts of fact and fantasy. Two places that could barely be more different.

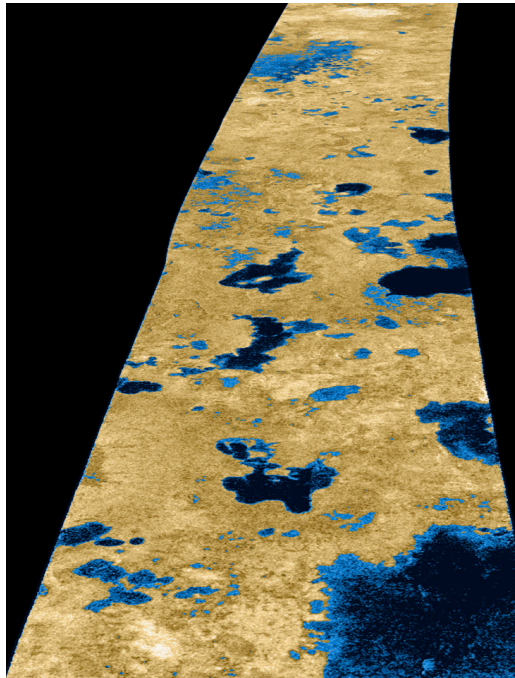
The great 13th century Mongol emperor Kublai Khan built his summer capital in what is now known as Inner Mongolia, about 350km north of modern Beijing. This city of 100,000 people was famously visited in 1275 by the venetian traveller Marco Polo who by citing gilded palaces, beautiful gardens and exotic wildlife implanted forever in our minds the image of Xanadu as a fantastic and luxurious place.

“And when you have ridden three days from the city last mentioned, between north-east and north, you come to a city called Chandu, which was built by the Khan now reigning. There is at this place a very fine marble palace, the rooms of which are all gilt and painted with figures of men and beasts and birds, and with a variety of trees and flowers, all executed with such exquisite art that you regard them with delight and astonishment.”

In 1797 the English romantic poet Samuel Coleridge was inspired by an opium induced dream after reading a text describing Xanadu by the clergyman Samuel Purchas, who was in turn indebted to Marco Polo. Until interrupted by the (in)famous “person from Perlock,” Coleridge managed to commit to paper the 54 (instead of the planned 300) lines of his famous poem “Kubla Khan.” The “person from Perlock” has become that which all artists fear, the moment or event that strikes away inspiration and idea in one swift moment and leaves us wondering what it all was and where it has all gone. “Kubla Khan” begins:

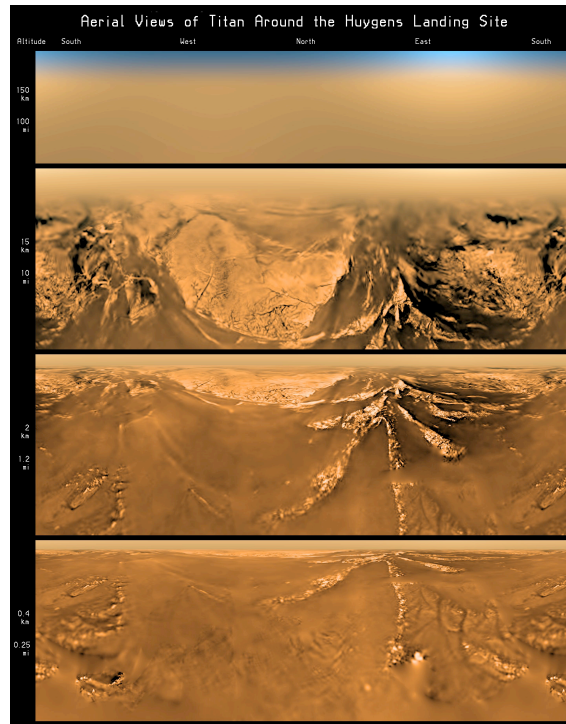
"In Xanadu did Kubla Khan
A stately pleasure-dome decree:
Where Alph, the sacred river, ran
Through caverns measureless to man
Down to a sunless sea.
So twice five miles of fertile ground
With walls and towers were girdled round:
And here were gardens bright with sinuous rills,
Where blossomed many an incense-bearing tree;
And here were forests ancient as the hills,
Enfolding sunny spots of greenery."

As a consequence of descriptions such as these Xanadu has become, in modern language, a metaphor for splendor and opulence, and has appeared as a concept in popular culture in many guises. From pop music rogues Frankie Goes to Hollywood in "Welcome to the Pleasure Dome" (1984) to science fiction in Ray Bradbury's "A Miracle of Rare Device" (1962). At the end of the 20th Century science fiction connected with science fact, though sadly too late for Vonnegut's "Sirens of Titan," and a bright area spotted by Cassini and commonly (but mistakenly) referred to as a "continent" on Saturn's moon Titan was officially named Xanadu. Thanks to the ongoing Cassini mission and the Huygens lander we have discovered that Titan is, in many ways, an "Earth like" place, with a thick atmosphere, mountains, a liquid cycle, lakes and rivers. However, owing to the fact that the mean temperature in this place is 190°C below zero these liquid features are liquid hydrocarbons like ethane and methane instead of water. A place like Earth then, but with a climate driven by liquid gasses, with mountains of rock ice, and with the possibility of a vast subsurface reservoir of water. Exotic indeed.



Credit: NASA/JPL/Space Science Institute

Speculation about Titan is rife and imaginations run riot. We see Titan as a proto Earth, and maybe even as a place that could harbour an exotic form of life. All the necessary variables are there, in one form or other. Speculation became so heated in fact, and the need for concrete data so keen that the ESA built Huygens probe that flew with Cassini was landed on Xanadu in 2005. The intention was that the lander would survive long enough to record data and images as it descended through the thick atmosphere. What actually happened was that it survived the whole trip and landed softly on the “crème brûlée” surface and sat there for 90 minutes taking and sending pictures of a world that was eerily familiar. We never imagined we would find out so much about the surface of an alien world in such a short time.

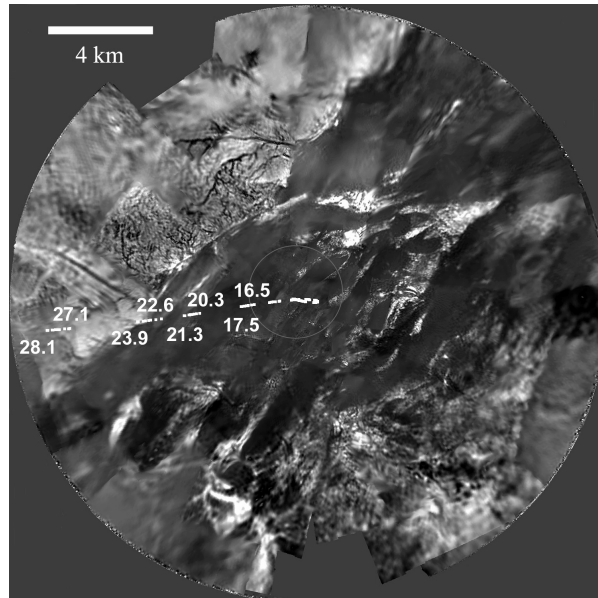


Credit: NASA/JPL/Space Science Institute

Titan, the possibilities of life there, the notion of terrestrial life forms colonizing it, the notion of exploration and revelation of distant exotic places have taken root firmly in my considerations of the science of astrobiology and its expression in my art works. While developing my ongoing project “*Drosophila titanus*” I found myself more and more imagining the reality of this weird place, its topology, its climate, its exotic extreme cold hydrocarbon chemistry, the sensation of cold and the colour of its atmosphere. Xanadu filled my dreams as it had with Coleridge over 200 years earlier. It seemed not only correct but necessary to try and recreate this place in some way.

So Xanadu would be recreated in a series of scale dioramas from obsessive attention to Cassini and Huygens data, the wealth of maps, charts, radar scans and photographic images at our disposal (and whatever we might think of NASA as an entity we must at least thank them for making so much material publicly available). Ultimately these dioramas would recreate the exact same conditions as they are found on Titan, with cryogenic systems allowing temperatures low enough to allow liquid methane and the formations of organic aerosols such as tholins.

Xanadu_1 – the first in this series – was made as an overview, a visualisation of a 4km radius around the location in which Huygens landed. Dense atmospheric smog, persistent rain and rivulets would be present, but using water in liquid form and ultrasonically produced vapours at room temperature this time.



Credit: NASA/JPL/Space Science Institute



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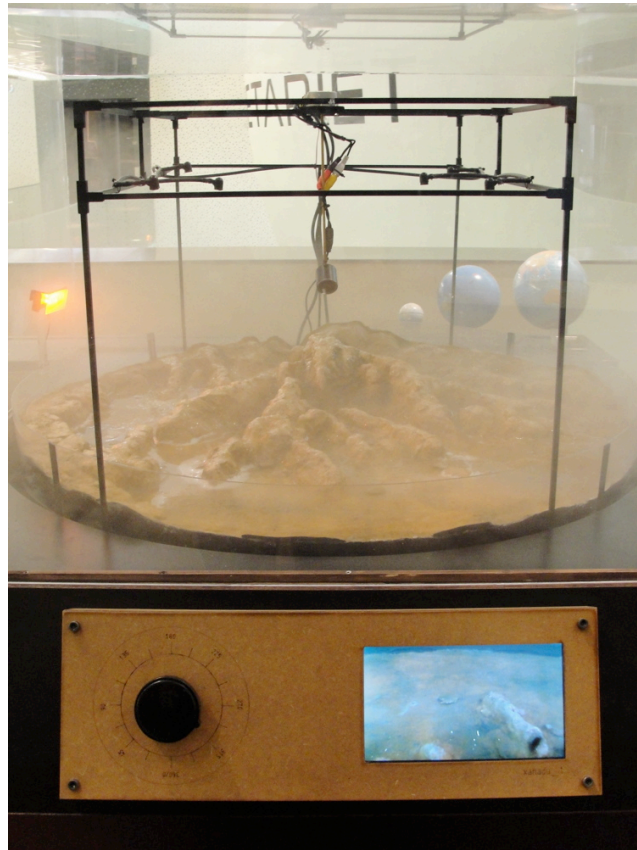
A remote controlled camera positioned at a certain height and trajectory above the landscape from which Huygens reported back some of its most

astounding images allows us to place our awareness momentarily within the descending probe. While our broader attention is directed to the wider landscape before us, the detail of the emerging mountain tops and eroded features begins to become apparent. Our attention is split between the real and the virtual, consistent with our common experience by proxy afforded to us by space probes and planetary landers. We are there and we are not there.

The word diorama comes from the Greek “through that which is seen,” and was first employed by one of the fathers of photography Louis-Jacques-Mandé Daguerre. “Through that which is seen” – it suggests a similar process or thinking philosophy as experiment, a “trial” or a “proof.” We create a thing or a process to enable us to see what was previously unknown or unseen. These Xanadu dioramas are experiments in visualising extraordinary situations under extraordinary circumstances.

On the one hand, *Xanadu_1* fits into the domain of hobbyist recreations of known places and landscapes, the desire to recreate what exists in perfect detail, to allow an overview usually reserved for flight. On the other hand it is a simulacrum, an image without the substance or qualities of the original, distorted intentionally to make it appear more correct in accordance with the little we know and the lot we have imagined. The piecing together of a series of glimpses in order to describe a whole for which we have no direct and detailed proof.

The future of the Xanadu project ties in more closely with astrobiology experiments, and more specifically the aspect of the field which deals with planetary science – the conditions and environments found on extraterrestrial bodies. These systems are generally prescribed as test beds, a place in which we can observe on the macro scale events and occurrences on any planet or moon we choose. Practicality triumphs over aesthetics, function over form. In Xanadu these methods will be reappropriated to allow for the aesthetics, the form, to shine through. The cryogenic Xanadu dioramas will allow us for fleeting moments to catch another glimpse of the reality of this environment, this few square kilometers of alien planet which we have come to know.



Credit: Andy Gracie