3D Disneyland: A Primer

By David A. Bossert

(*3D Disneyland: Like You've Never Seen It Before* with a sampling of some of the pages from the book. The Old Mill Press, 2020.)

My first introduction, like many I'm sure, to Stereoscopic or 3D photography was through a GAF Viewmaster when I was about twelve-years-old. That red and white plastic viewer transported me to far-off places allowing me to see the wonders of the world in glorious three-dimensional space. At the time, it was the closest I could get to being there in person. The Viewmaster took those enchanting places and magnificent, one-of-a-kind landmarks like Big Ben and the Eiffel Tower beyond the flat, two-dimensional picture in a book or magazine and brought them to life. Dropping a round disc, containing seven pairs of photos, into that handheld viewer turned my bedroom into a global sightseeing tour, and it was thrilling. That small plastic device, some called a toy, opened up a whole new world for me. The most fascinating part was the simple science behind replicating how we see everything around us.

Stereoscopic or 3D photography has been around since the invention of the camera and film. By the 1850s, stereoscopic images were on display in many middle-class homes. As photography matured and became more accessible to the masses, stereo photography grew in

popularity. Although stereo photography has gone in and out of favor, it has always been a specialized part of photography for the professional and a luxury for the hobbyist. Its popularity declined after World War I and dropped precipitously during the Great Depression due to the challenging economic environment at that time. There was a revival of sorts in stereo photography after World War II with the introduction of new cameras from Europe along with what was known as the "European format" that used 35mm slide film. This format allowed for sixteen pairs of images, or eight stereo views, to be exposed on a standard twenty-exposure roll of film. This advancement made the format available to everyone.

(Here are two seemingly identical photos of the Peter Pan inspired skull rock at the Pirate Lagoon that was next to the Pirate ship in Fantasyland circa. 1980. These are actually two slightly different photos that represent the left and right eye view. When the left eye view is tinted magenta, and the right eye is tinted cyan, and then both are combined, it creates an anaglyph 3D image, as seen below. Photo ©Ted Kierscey.)

Stereoscopic photography is the art of capturing two slightly offset photographic images in order to create one three-dimensional image. Those two offset photographs represent the left and right eye views of an object or composition such as a portrait or landscape. Looking at the left and right eye images with a special viewer merges the two pictures and creates a three-dimensional

view of an image complete with parallax--the effect whereby the placement or orientation of an object appears to differ when viewed from slightly different positions. To see this, look at any object and then alternate between closing and opening each eye, and you will see the offset difference or parallax of the image you are viewing.

(The anaglyph image of the skull rock view in Fantasyland circa. 1980. Note the slight offset of the waterfalls in the distance, each one is represented with one magenta and one cyan tinted view—that is the difference between what the left and right eye see. Photo ©Ted Kierscey)

Think of stereo photography this way, each of our eyes is in a different location, which sees a slightly different version of what we look at. The difference between the images, when viewed together, allows us to perceive depth. To replicate that in photography, we can take two pictures of a view offset by a similar distance as our eyes.

Using a stereo camera that has two lenses that are offset from each other by about two and a half inches on center, you can create a pair of images that, when viewed together, have that same level of depth as if you were in that same view with your own eyes. When the two offset photographs are viewed together, our brain merges those two images into one, as it does with our own vision, and we recognize a single three-dimensional image. This is often referred to as stereopsis, which is the ability to perceive three-dimensional depth on the "basis of visual information deriving from two eyes by individuals with normally developed binocular vision."[i] The term binocular vision is a type of vision in "which an animal having two eyes is able to perceive a single three-dimensional image of its surroundings."[ii] The average human can see 190 degrees with two eyes, approximately 120 degrees of which makes up the binocular field of view (seen by both eyes) flanked by two uniocular fields (seen by only one eye) of approximately 40 degrees.[iii] That is how we see the world.

The photographer is an artist who creates unique, original, and one-of-kind compositions by looking through the viewfinder of the camera and capturing that image with the click of a button. What stereo photography does is capture that image as a moment in *time* and *space*, which is the most authentic representation of the view portrayed aside from being at that location, at that moment in person.

We are all artists, whether you believe that or not. The mere act of picking up a camera, pointing it, and snapping a photo in a fundamental sense does make you an artist because you

aimed, composed, and chose the exact moment to take that photo. That picture is an original work you created. Now, it may not be a great work of art—the composition may be terrible, and the exposure may be awful—but you did create it. To take masterful photos requires time and practice. Having an "eye" for taking pictures comes naturally to some, and others must work at it, but everyone can develop those skills if they are willing to put in the effort. Like anything, you can learn to take great pictures through either studying a book on the subject, taking an online course, or receiving hands-on instruction in a classroom with an accomplished photographer.

If you had no interest in improving your skills or learning photography, the Viewmaster was a wonderful choice as a way to take home great vacation photos. The Viewmaster discs became ubiquitous at tourist destinations. There was always a rack or at least several different packages of discs containing professionally photographed views of whatever attractions you happened to be visiting. Even if you are not interested in taking stereo photographs, there were photo spots marked at some locations so that you could take your own great shots, regular or stereo, if you wanted. At Disneyland, there were the Kodak Picture Spots, then the GAF photo trail that even had a brochure showing each spot where you could take an iconic picture. In 1977, the sponsorship changed to Polaroid, which allowed you to borrow a camera for use in the Park—but you had to buy the film. There are still sponsor markers at the Disneyland Resort and Disney California Adventure Park, which have changed over the years from Kodak to GAF to Polaroid back to Kodak and then to the current sponsor, Nikon, as of 2019. The sponsor names may change, but there are always great spots around the parks to take photos, and having a guide makes it that much easier to snap memorable pictures.

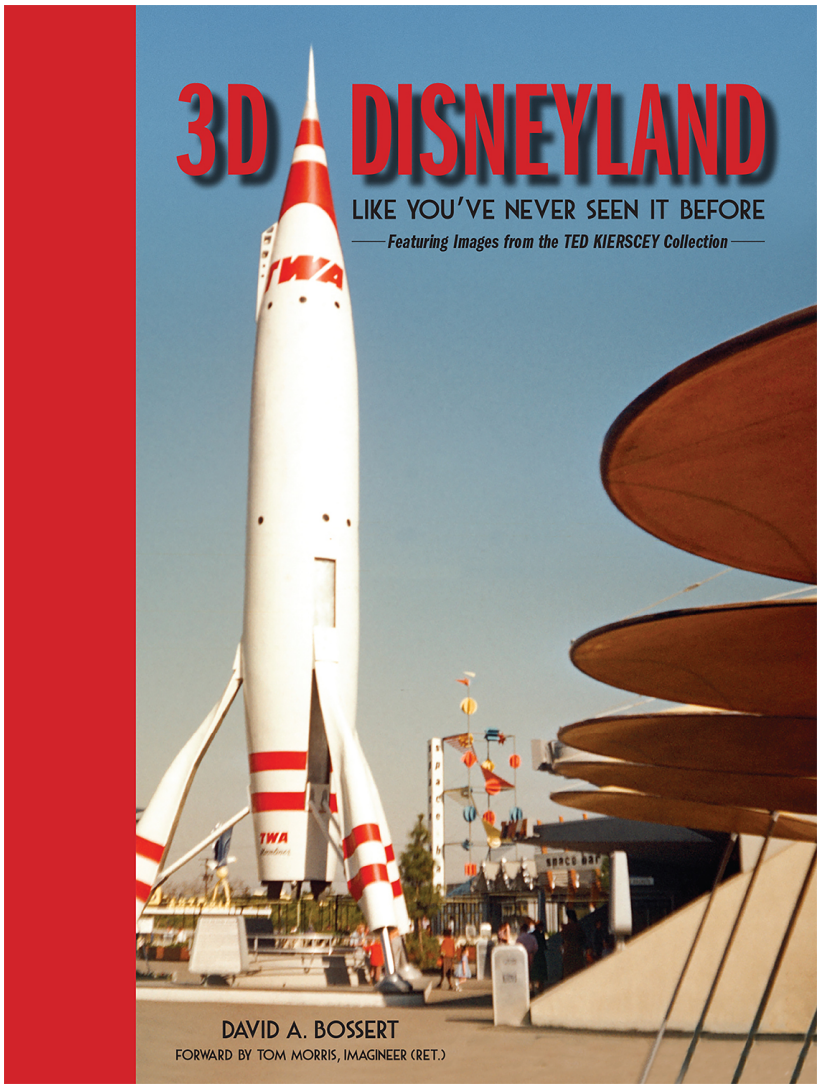
(Looking west towards the Jungle Navigation Company boathouse ride loading area of The Jungle Cruise attraction in 1955. This photo is another example of an anaglyph image, which appears in the book, and requires 3D glasses, the ones with the magenta and cyan lenses, to see the 3D quality of the photo. Photo ©Ted Kierscey.)

I got an early education in photography using my GAF Viewmaster and studying each pair of photos over and over again. I spent hours looking at my collection of Viewmaster discs. I studied how the images were composed— how the photographer chose his view by making sure there were elements in the foreground, middle-ground, and background. An awareness of these

elements and how they are placed is vital in stereo photography because it will enhance the dimensionality of the image. Strategically placed objects in the frame of an image create the parallax or depth perception within the field of view. This care in composing maximizes the 3D effect, which is the whole point of using this photographic technique.

As I grew up, my Viewmaster and assortment of discs went into a box I looked at every so often as my interests and artistic tastes evolved. I got a 35mm, single-lens reflects (SLR) camera and was happy taking regular, flat two-dimensional photographs, especially when I was traveling. Then over time, with the advancement of technology, I began using the camera on my phone more often. Soon, my 35mm SLR joined my Veiwmaster in the box I rarely opened except to add something I was no longer using.

But my admiration for stereoscopic photography didn't completely wane as more movie studios began to release films in 3D. There has been a resurgence in this technique, and this time around, it's not just films but also television and gaming. Anytime I read an article or see an ad for a movie in 3D, it always makes me think of that first GAF Viewmaster I had all those years ago. What's old is new again, as they say. My interest in stereo photography was further peaked by my friend and colleague Ted Kierscey at The Walt Disney Company. Ted had been shooting stereo photographs since 1955 when he purchased his Kodak Aniston Stereo 35MM camera.



(The cover of 3D Disneyland: Like You've Never Seen It Before. The Old Mill Press, 2020)

One day, while we were working on Beauty and the Beast, he brought in some of his stereo slides of Disneyland from opening week to show me. Since I grew up on the east coast, I had not visited Disneyland for the first time until about 1980-81. So, getting a chance to see Disneyland in its infancy not just in a flat photo but in stereo was a real treat. Several years later, Ted brought in a selection of his Disneyland slides with a projector, and we commandeered a conference room after hours at the Roy E. Disney Animation Building to show them. We ordered some pizza, a small group of us sat in the dark with our 3D-Glasses on enjoyed more than an

hour of slides from the first five years that Disneyland was open. The bonus was that Disney legend and Imagineer Tony Baxter was there regaling us with behind the scene stories of the attractions that Ted had captured decades earlier.

I said to Ted afterward that his Disneyland pictures should be in a book. As the years went by and the decades passed, Ted retired from the studio, but we have remained friends. On one of my visits to Ted, who now lives out of town, we got to talking about his collection of stereo photographs of Disneyland. Out of that discussion, we decided to put a selection of his stereo photos into a book, *3D Disneyland: Like You've Never Seen It Before*. Some twenty-five years ago, the seeds were planted for this book, and all this time later, these never-before-seen photos are now being shared with the public. I have also written more extensively about Ted and how he met Walt Disney, went to Vietnam, came home from the war, eventually got hired at Walt Disney Productions, where the Nine Old Men mentored him, and he had a storied career as a master Special Effects Animator.

Aside from gaining an understanding of stereo photography and reading about Ted's adventures, *3D Disneyland: Like You've Never Seen It Before* showcases nearly a hundred stereo photographs from opening week at Disneyland through 1959 and then during the Park's 25th Anniversary in 1980. There are a few additional stereo photos from later years to round out the selection. The book is laid out as a walking tour of Disneyland with relevant photos group together by each land or area of the Park. As we put this book together, we felt that it needed Walt Disney himself represented since the part was his brainchild. The stereo photographs of the Park are bookended by two photos of Walt Disney in 3D. Now, these are the only two photos that have been converted into stereo images using digital technology—all the other photos were shot with a stereo camera.

This book is extraordinary, not just because of the story behind how it came to fruition or because it is the first time the public is seeing Ted's photos but also because it is the first time that we know of that you will get to see Walt Disney in 3D. There is also a lovely foreword written by Tom K. Morris, Imagineer (Retired), who spent decades working on Disneyland. Finally, the one thing that you should remember is that with *3D Disneyland: Like You've Never Seen It Before* the Park will always be open!

A signed, numbered limited-edition copy of this book is available for pre-order here: https://theoldmillpress.com/3d-disneyland.html , or you can order the regular edition at your favorite online bookseller.

A portion of this article was extracted from *3D Disneyland: Like You've Never Seen It Before.*

---

[i] Howard IP, Rogers BJ (1995). Binocular vision and stereopsis. New York: Oxford University Press.
[ii] Fahle, M (1987). "Wozu zwei Augen? [Why two eyes?]". Naturwissenschaften. 74 (8): 383–385.
[iii] Henson, D.B. (1993). Visual Fields. Oxford: Oxford University Press.