CLASS: WALKER
LAUNCHED: 23RD C
LENGTH: 423.37 METERS
CAPTAIN: GEORGIOU

U.S.S. SHENZHOU
SPECIAL ISSUE
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U.S.S. SHENZHOU

SPECIFICATION

FIRST APPEARS: THE VULCAN HELLO
LOST (23RD C): THE BATTLE AT THE BINARY STARS
DESIGNED BY: JOHN EAVES
CAPTAIN: GEORGIOU
DESIGNING THE
U.S.S. SHENZhou

Concept illustrator John Eaves overcame several challenges to design the distinctive-looking starship.
Designing one starship is challenging enough, but when veteran concept illustrator John Eaves signed on to work on DISCOVERY, he was tasked with coming up with two principal ships: the U.S.S. Discovery and the U.S.S. Shenzhou. Not only that, but he had to deliver them both at the same time.

Having cut his teeth on DEEP SPACE NINE and various STAR TREK movies, Eaves was accustomed to tight deadlines or the usual request for every new STAR TREK ship to be completely different to anything that had been seen before. DISCOVERY’s co-creator and original showrunner Bryan Fuller told him and production designer Mark Worthington that the two ships should provide a contrast to one another, and that while he wanted the U.S.S. Discovery to look radically different from anything we had seen before, he was

▲ Inspired by the X-planes of the 1940s, John Eaves came up with a starship that looked very different to the Enterprise of THE ORIGINAL SERIES, complete with angular nacelles and a bridge located on the underside.
Eaves started the process by producing dozens of sketches showing potential versions of the Shenzhou from different viewpoints.
happy for the Shenzhou to be inspired by a classic STAR TREK design. As Fuller explains, he wanted Georgiou’s ship to feel instantly familiar to the audience, so that when they finally saw the Discovery in the third episode they would be startled by the way it looked. “We wanted the Shenzhou to be a much more traditional design so that when you got to the Discovery and it looked different, you wondered why it was so different.”

**FAMILIAR ELEMENTS**

This didn’t mean that Fuller wanted the design of the Shenzhou to be unambitious. He insisted that everything on the show would have a new aesthetic that would take STAR TREK into a new era, but unlike the Discovery itself, he felt this ship could be a new version of something familiar.

“We talked a lot about the Reliant,” Fuller says, “which is a wonderful ship in the STAR TREK canon.” He goes on to say that he wasn’t just attracted to the design of the Reliant, he was also thinking about its place in history. It was important to him that his STAR TREK would be as diverse and inclusive as possible. As he explains, this had given him the name for the ship. “I wanted an Asian female captain,” he explains, and calling the ship the Shenzhou after the Chinese space station felt like a wonderful way of acknowledging the scientific achievement of the Chinese community.”

The Reliant also tied into this desire for
diversity, since when it made its debut in *THE WRATH OF KHAN* it had the first black captain we’d seen in *STAR TREK*. “The *Reliant* has a wonderful history of minority representation,” Fuller says. “We thought it would be a nice nod to echo its design with the *Shenzhou*, because we wanted to give it a context that non-white *STAR TREK* fans might appreciate.” 

When it came to the actual design of the *Shenzhou*, Eaves produced between 60 and 70 sketches showing three-quarter, top and side views. Almost every sketch that he produced was in the mold of the *Reliant*, with two nacelles connected to a saucer but without a secondary hull. Some had rollbars across the top, others had the nacelles above the ship, while still others placed them below.
When a design showed promise, Eaves would work up a more detailed color rendering. The most promising designs were worked up in more detail, while others were put to one side with the intention that they could become the fleet of ships that came to Georgiou’s aid at the Battle at the Binary Stars.

The first serious pass at the *Shenzhou* had twin nacelles mounted on the top of the saucer toward the rear in a V shape. Eaves remembers that there was something about the design that he wasn’t completely convinced by and he was relieved when it was rejected. Even at this early stage the idea came up of moving the bridge to the underside of the saucer where the *Enterprise*’s sensor dome had been housed. “The under-slung carriage was something Mark Worthington pitched,” Fuller recalls.
The next version of the Shenzhou established a design direction that would last until the design was finalized: the nacelles were underneath and the saucer had raised, faceted sections.

“I thought ‘I haven’t seen that before’ and I loved that.”

As Fuller remembers, it wasn’t too long before they identified the shape he wanted for the Shenzhou. On the next version of the ship that was taken seriously, both the bridge and the nacelles were under the saucer, supported by a kind of catamaran arrangement, something that he liked because of the way it echoed the design of the Reliant.

“Todd Cherniawsky was the one that finally gave good direction on it,” says Eaves. “I did one sketch he liked and we flipped it over and then angled the nacelles. Todd had really liked the B-plane with the double wings on the bottom. So it was just a matter of detailing at that point. Putting the bridge on the bottom, and the nacelles… they were originally up, but putting them down made the flow work really well on the whole side view and profile configuration. It made a protective area and added a lot more defense structure around the bridge.”

STRANGE HYBRID
By this stage the top of the ship had become curved rather than flat and the ship had acquired shoulders at the back of the saucer. “We thought it would be interesting,” Fuller recalls, “if the silhouette of the Shenzhou looked as if the Reliant had mated with the hunched shape of the Klingon bird-of-prey. That basic silhouette was settled on relatively quickly.”

The process of detailing the ship would, however, take much longer. “I was in the art department every day,” Fuller remembers,
This version of the ship was considerably “chunkier” than the ships of Kirk’s era and had a shuttlebay in the rear of the saucer.

Again, Eaves worked up color renderings, showing the ship from different angles.
“because there was such a massive amount of world building. There was a mad scramble to do things in the timeframe that was given us. There was a lot more we were working on in terms of the design.

“For example,” he reveals “There was going to be an escape shuttle at the rear of the bridge. You would have gone through the back doors of the bridge and essentially you would have been in another ship, like the captain’s yacht. It would have ejected from the back of the bridge, but all of that got simplified because of the schedule.”

The art department knew that Fuller wanted to see new ideas so they constantly played around with different ways of approaching familiar elements. One experiment involved putting the bridge in a notch at the front of the saucer. Fuller liked the idea but decided to keep it for a different ship.

PAST AND FUTURE

As Eaves worked on the detailing, he concentrated on making the ship fit into the series’ timeframe. “You’ll see some elements of the NX-01 from the past and you’ll see some elements of the Reliant from what’s to come,” he explains. “I felt it was important to try to tie these timeframes together in detailed form to put the ship into context.

What was interesting about the Shenzhou is because we have that body – the hull that reaches the top of the saucer – it got in the way of where the NCC number and the ship’s name would go at the front of the
One of the ideas the art department started to experiment with involved putting accent colors on the outside of the ship. At this point they considered a blue/green color. Eaves, by the way, is color blind.

By this stage, the accent color had become red. The class and registry were suggested by the art department.
Although the basic design was locked, it continued to evolve and other members of the art department chipped in to help. These passes by Thomas Pringle were done to explore different color schemes.

**DIFFERENT AESTHETICS**

When it came to deciding on the lighting sources for the ship, Eaves once again drew inspiration from the aviation industry and aircraft carriers of the 1940s. “Where the numbers are illuminated, as opposed to being lit from a separate light source, it looks very primitive; it looked more 1940s than the 1940s! So we did this little bank of multiple lights and it turned out looking pretty good. You’ll see that on almost all the ships in DISCOVERY; anything that’s illuminated is going to be a bank of little individual lights. There’s a whole series of fins on all the ships and that’s kind of a tie-in from some of the old experimental jets of the ‘50s and ‘60s like the F-104, which had these blades.’

“Coming up with a shape that worked for
both ships and for Bryan was one thing,” says Eaves. “But at the same time, we also had to find a way to explain why these ships in the same fleet as Enterprise would look completely different from it. It was a process that took many months and involved hundreds of sketches until we were finally on the right track.”

“I talked it over with Todd Cherniawsky, who was the production designer by that point, and we eventually came up with the theory to explain why these new ships didn’t have round nacelles and looked a bit out of place,” recalls Eaves. “We came up with this idea that it was like the old Edwards Air Force Base in the ‘40s. All these companies were creating these new X-planes and, even though the purpose was the same, they all looked drastically different. So we created this whole scenario that this was like an experimental stage. Up to that point, the Vulcans had been influential on matters of ship design, but now the humans had decided that they’d had enough of that influence and they wanted to go on their own. So this is just a 20 or 25-year
By this point Scott Schneider had joined the team and was working on the position and design of essential systems such as the RCS thrusters.

Pringle produced this drawing to show how the color could be applied to the underside of the ship.

detachment from that association to (where humans have) come up with their own style of ships.”

In keeping with their theory, Cherniawsky and Eaves decided that all of the fleet ships would be named after test pilots, X-plane pilots and astronauts of various eras. The Shenzhou became a Walker-class ship after Joe Walker, while the Crossfield-class Discovery was named after Scott Crossfield, another X15 pilot.

Eaves had previously been instructed that as well as being flat, the ships all had to have the same pale color pattern rather than the dove gray used on the Enterprise of TOS. The Aztec patterning of the hull plating had to be very subtle.

“We came up with a whole new Aztec pattern for all the ships, so they all use the same breakdown,” says Eaves. However, the new paint job proved to be a little too subtle, and the consensus was that, compared to the other ships, the Shenzhou looked somewhat dull. “I asked Todd if I could do some red striping on it. He thought about it and said, ‘give it a go.’ The red striping, and the insignia, really made it stand out. We added white lettering as opposed to black on all the (other) ships.”

DEFLECTOR

Eaves had originally fashioned all the ships in the fleet to carry the same heavy-looking deflector dish featuring a double antenna, but after the model of the Shenzhou returned from the CG team that had changed. “All
At one point the producers considered giving the Shenzhou stealth technology. These Thomas Pringle designs were all created to show what the hull might look like when this was activated.
This unpainted model was produced by the VFX team for the art department to paint over.

These ships carried the same details, although the shapes were different.” Eaves reveals. “A lot of them used ideas that started when we were working on the Shenzhou. Some of them had a break in the saucer where the bridge was inset inside a notch. For example, on the Europa, the bridge was actually in the front in that little nook for a while; it’s at the back where that breach of the arms go. We immediately noticed that it was at an angle, and historically all the other ships are pretty much flat.”

**EXPLORATION VESSEL**

After many months, a design for the ship was finally approved and handed over to the CG team. The U.S.S. Shenzhou further evolved between the CG stage and the final design. “The one the CG team had produced was a little bit smoother in the design stages. It wasn’t as heavy and pronounced as the final version,” Eaves says. However, he is pleased that the final design was the result of a collaborative effort. “I like what everybody did with it. Seeing it in the end I thought, ‘that’s not where we were going but it’s really cool!’ It’s really like a 10-stage collaboration. I’m like step one, and then the model guys are step two, and then the CG guys... and it goes on. It’s cool to see where you left off and other people took over. It’s a neat working process.”
One of the key points of the story involved the Shenzhou being badly damaged in the Battle of the Binary Stars.