VAADWAUR ASSAULT FIGHTER

CREW: ONE
LAUNCHED: 15th C
LENGTH: 70 METERS
WEAPON: PARTICLE CANNON
Stand assembly:

1. Stand the stand to the back of the hull.
The Vaadwaur assault fighter was a small, highly-maneuverable combat ship that was in operation in the 15th century. It was capable of flying in both the atmosphere of a planet and in space, and could be operated by a single pilot. The assault fighter was roughly 70 meters in length and had an extremely narrow profile, which made it ideal for close quarter dogfights, as it was difficult to target. The ship was also armed with particle cannons, and the twin barrels were located either side of the cockpit making it easier to line up an enemy ship.

Assault fighters were also able to make use of subspace corridors, which the Vaadwaur had discovered. These areas of space were like naturally occurring tunnels, and once a ship had entered one, it accelerated to vast speeds. It was possible to travel 200 light years in just five minutes.

**VAST NETWORK**

The Vaadwaur had charted a myriad of interconnected subspace corridors throughout the Delta Quadrant over hundreds of years. The corridors were unstable and damaged by use, but the Vaadwaur worked out a way of maintaining them and keeping them in good order.

The Vaadwaur also used these corridors to travel to numerous other worlds throughout the Delta Quadrant, where their assault fighters would attack them. Using their superior technology, battalions of assault fighters, numbering in their hundreds, would plunder countless planets and they were powerless to resist.

The Vaadwaur’s military dominance led them to huge prosperity and they were able to build magnificent cities on their homeworld, which ensured a high quality of life for their population of six billion. Eventually, however, dozens of the species that they had suppressed banded together and fought back. The battle was long and bitter, but eventually superior numbers crushed the Vaadwaur forces and they faced the extermination of their race.
One battalion of the Vaadwaur was saved by two scientists named Gedrin and Jisa, who were husband and wife. They prepared more than a thousand bio-beds in a chamber several hundred meters below the planet’s capital, where they could be placed in suspended animation. They also stored hundreds of ships, land vehicles and weapons, as they planned to awaken five years later and flee their devastated planet and start a new colony.

In the final attack on the Vaadwaur homeworld, however, the controls on their stasis pods were damaged and they were not reawakened until 892 years later. In fact, they were not revived for another 892 years, when in 2376 the crew of the U.S.S. Voyager NCC-74656 found the pods after taking refuge on their planet.

The Voyager crew managed to revive about 200 individuals, although another 400 had died because their pods malfunctioned. The surviving Vaadwaur made a deal with the Starfleet crew. They would show them subspace corridors that could take them a thousand light years nearer home, if they helped them avoid the Turei ships that had chased Voyager to the planet.

RESTORED FIGHTERS
With the assistance of chief engineer B’Elanna Torres, they managed to reactivate 73 assault fighters out of the 200 that were there. These ships, although advanced in the 15th century, were now archaic in the 24th century and no match for the Turei vessels. Gaul, the head of the Vaadwaur militia, knew this and plotted to take control of Voyager, so they would have a state-of-the-art vessel with which to reclaim their former territories.

Gaul launched an attack on Voyager, as a wave of 17 assault fighters made straight for the Starfleet ship. The Vaadwaur ships were not very robust and Voyager was able to disable four of them, but when another 48 fighters were launched, Voyager was in danger of becoming overwhelmed.

Janeway contacted the Turei asking for help, while Gedrin, who felt remorse at how his species behaved in the past, transmitted targeting data from a satellite that allowed them to pinpoint the assault fighters. The Turei destroyed six Vaadwaur ships, and the others broke off their attack. The Turei then bombarded the underground chamber and in the chaos Voyager managed to escape, but so too did 53 Vaadwaur assault fighters.
After Captain Janeway refused to let the Turei board her ship to delete all information about the subspace corridors, the Turei attacked her ship. Voyager was forced to seek shelter on the Vaadwaur homeworld. Here, the gamma radiation levels were still highly toxic following the war that had taken place there nearly 900 years earlier.

Unlike Voyager, the Turei ships could not withstand the radiation and waited in orbit for them to take off again. It was during this time that the Voyager crew found the Vaadwaur in their stasis pods and revived them. It was not long before the Vaadwaur survivors turned against Captain Janeway and her crew and planned to take their ship.

When Voyager was attacked by several Vaadwaur fighters, it was easily able to defeat them because they were so antiquated. However, when more Vaadwaur fighters joined the attack, Janeway was forced to ask the Turei for help.

The Turei could scarcely believe that there were any Vaadwaur still alive, but they were unable to do anything because their targeting sensors could not penetrate the radioactive atmosphere. It was only when Gedrin, who felt guilt at how his people had behaved, used a Vaadwaur satellite to locate the assault fighters that the tables turned. This forced the Vaadwaur fighters, who were heavily outgunned, to flee before they were all destroyed by their old enemy.
Tim Earls was officially the set designer on STAR TREK: VOYAGER, but occasionally he helped out senior illustrator Rick Sternbach by designing some of the alien ships. Thus, when it came to ‘Dragon’s Teeth,’ Earls produced some concept drawings for the Vaadwaur ships. However, this episode proved to be very expensive in terms of special effects and the budget had been exhausted before the CG Vaadwaur fighters had been created. This meant the CG artists at effects house Foundation Imaging had to find a cheaper way of producing the necessary ships, rather than creating them from scratch. Taking Earls’ concept as a guide, they managed to take an amalgam of CG ships already built and turn them into an approximation of Earls’ original design.

ALIEN ARCHITECTURE
The Vaadwaur city was a different matter. It was actually built as a 3D model, with Earls working with VFX supervisor Ronald B. Moore and the modelers at Foundation Imaging. Earls had an architectural background and this made him the ideal person to design an alien cityscape. He explained that he tried to make sure that the city looked suitably alien, while remaining convincing.

“It was a matter of researching certain details that aren’t that common in construction and trying to build off that to create something alien," said Earls. “I used shapes that would be a little difficult to build with our current technology. Today our buildings keep getting taller, but builders are limited by the tensile strength of the materials available. I started putting shapes together and subtracting other shapes from it.”

Earls went on to say that he tried combining different architectural styles to create something unique.

“We had some gothic structures; I went with a circular building that had a gothic base. Sometimes I used established architectural proportion. When designing alien structures, if you try to depart too far from those established classic proportions they start to look wrong and ugly. I feel architectural language is maybe universal.”

Despite his best efforts, Earls said his first drawing was a little too Earthlike, so he revisited it, developing another architectural style. “My first version did look a lot more like New York City than the second one did.

“I redid many of the structures; again I was really trying to rely on established architectural proportions but using these pagoda-type buildings. I thought they were pleasing, and possibly alien – you don’t see pagodas like that! It turned out that the final product still looked a little Earthlike, but it was kind of hard to get away from that with architecture!”

DESIGNING THE VAADWAUR

Tim Earls’ design for the Vaadwaur assault fighter ended up not being used, but his concepts for the Vaadwaur city made it to the screen.

Earls drew on various different architectural styles for the Vaadwaur city. The first one below, Earls felt was too like New York, but the second one featured Eastern-styled tiered building and looked more alien.
Over the years, STAR TREK pushed visual effects technology to the limits, and VOYAGER’s sixth season was no exception. One of the most demanding shows of the season for the visual effects team was ‘Dragon’s Teeth.’ The episode called for the U.S.S. Voyager NCC-74656 to fly through a series of subspace corridors, take refuge on a planet amid the ruins of an ancient Vaadwaur city, and most spectacularly of all show an elaborate battle in space featuring numerous ships.

The subspace corridors were fairly easy to create. Foundation simply took the existing quantum slipstream effect that had been used in Season Four’s episode ‘Hope and Fear,’ changed the color, and threw in some dirt. The fleet that assembled to fight the Vaadwaur was also fairly straightforward. Foundation were able to create a wide variety of ships by modifying several existing models. The ruined city, however, presented Ron Moore with a real challenge.

**HUGE UNDERTAKING**

“I made the decision very early that I wanted to do the city as a CG model,” said Moore. “We would have been limited to how big a miniature we could have built and shot, so we decided to go CG. It was a lot of work; it was very ambitious.”

This decision got Foundation’s Mojo quite excited. As he said, “We loved seeing Voyager in an environment other than space. It gave us a chance to light the ship and try to make it look a little bit more like a real thing. It helped reiterate that Voyager was out there experiencing all these wonderful, strange new things. ‘Dragon’s Teeth’ was a wonderful opportunity to do that. Voyager was seen not just within the wreckage of this ancient city, but I loved the shots where it was escaping through these beautiful orange clouds. Those were far simpler than the city, but they were some of my favorite shots.”

**VAADWAUR ARCHITECTS**

“There were some concept sketches of the city done by [set designer] Tim Earls,” continued Mojo. “We used those as a jumping-off point, and Ron and I also looked through some architecture books to find a few building designs with a general look that we thought were interesting. Between the sketches and the books and the imagination of Brandon MacDougall, the CG artist who built it, we basically determined the look of the city.”

The ruined Vaadwaur city from ‘Dragon’s Teeth’ was a fully CG environment. This meant effects house Foundation Imaging could film it from any angle and even fly the U.S.S. Voyager down the streets.


The ruined Vaadwaur capital city was restored to pristine condition with blue skies overhead for the opening sequence. Foundation also took advantage of the city’s CG nature to create an impressive effect that Mojo said no one really expected. “The first shot in the whole show was the city in the past being bombarded. That was a lot of fun. I knew that shot was a lot more than they were expecting. They just wanted the city, a couple of flames and some missiles flying in. We really wanted to make it spectacular, so we had that whole bit where the missile went right into the building.”

ALMOST PERFECT

The final result was impressive, but Moore said he was one of his own harshest critics and that he wished they could have done more.

“It was one of those things where time literally ran out on us,” said Moore. “It was good, we worked really hard at it, but we were so close to a little bit more realism. It had to do with things most people don’t care about, like aerial perspective, how much of the smog was there, and all of that.”

Moore was also a little disappointed to discover that one of the shots he hoped to include didn’t look quite right. “The shot we really wanted to do was running down the street,” said Moore. “I wanted Voyager to come up off the ground and then jump to high speed going down the street; you’d see windows popping out and all that stuff. That was the image we wanted, but we had to slow it down a little bit because of the position of all the other ships. That was what we were really into with the city. I think it came out pretty cool.”

The episode ‘One Small Step’ was another huge show for the visual effects team. The Delta Flyer was seen alongside ship debris inside a graviton ellipse, which featured orange fiery light and intermittent lightning crackling in the background. People should know those bizarre twisting clouds. People should know those things – were trying to create something alien and we got people excited. We were fascinated that we were trying to create something alien and we wound up mimicking something that was real.”

This episode’s visual effects were headed by supervisor Mitch Suskin, who said, “‘One Small Step’ was one of our favorite shows of the season. We liked it because we were able to have a counterpart to the STAR TREK universe, where everything is perfect, and get something that was a little bit more like present NASA space travel. So the made makers put a great deal of effort into building the Aries IV (even though we only see it in a few shots), and into accommodating senior illustrator Rick Sternbach’s concerns, because he really knows his stuff.”
"We also made an effort to light it more like NASA footage than our usual STAR TREK shots. We were real pleased with that. We were also really pleased with the interior of the anomaly. It was a 3-D particle effect. Having the floating debris, having the floating ships doing the tractor beams, and having things work together was somewhat daunting, but we were fairly satisfied with it."

The next time we saw the Aries IV it was in orbit around Mars. For this shot, Foundation’s CG supervisor Rob Bonchune created the planet as a CG model.

"Mars was interesting because I originally did it based on a real NASA photograph of Mars," said Bonchune. "I made it look exactly like that and the producers rejected it. I was going, ‘This is Mars!’ I showed them a picture from the Viking probe and then they agreed, but they said, ‘It still doesn’t look right anyway. It’s not a VOYAGER planet.’ In other words, consistency within the show was more important than reality. It was kind of funny, though."

CREATING MARS

Suskin was able to create the surface of the red planet without commissioning any new mattes or CG environments. "That was actually some stock footage from an old Paramount show, where it was originally the moon," said Suskin. "We took it into the composites bay and recolored the shot to make it look like Mars. It was a stock element we borrowed from the Paramount library and manipulated. We blew it up and put this little trolley we could paint out. It was the shot where he floated from the background to the foreground; that was the only shot where you saw him head to toe floating through the shot."

"Several times in the show he was laying on the rig and it was under his shirt, but there were no camera tricks. It was brilliantly done and it really helped us out. There was also a shot where Seven of Nine beamed into the Aries IV and she pushed a flashlight away. It was originally supposed to be an optical effect, and they were rehearsing it with the flashlight on a wire just to give her the idea, and they just decided to do it that way!"

"I was very happy with the internal structure of that anomaly," explained Bonchune. "I thought that was really, really cool. It was all CG. One of our CG artists, Kyle Toucher, who was trying to do something else completely, stumbled on an effect for the inside, for the shimmering lights, that cracking lightning effect. It was just amazing. You were looking for one thing and, boom!, you found the perfect effect for something else. So we were pretty proud of that. They accepted it from the get-go, no re-dos. That was a very rare thing on STAR TREK. They just went, ‘Yeah, that’s perfect,’ and off it went."

FAVORITE SHOT

Suskin was very pleased with the anomaly, and said that one shot in particular stuck in his mind. "We liked little things like the alien spaceship floating past the window," said Suskin. "We were particularly fond of it because you didn’t get a big view of the ship, but you got enough to know its an alien ship, and we were helped by the audio effect of the thing scraping along the side."

The show also involved many shots of weightlessness. Often this effect was accomplished by suspending the actors on wires, which were then digitally removed. However, in this case, Suskin found that this was unnecessary. "Oddly enough, most of the brilliance of the weightlessness was from Marvin Rush, the director of photography," said Suskin. "A lot of the footage was shot with a camera on a crane and most of the time you didn’t see where their feet or their hands were. There was only one shot in the entire show where we put the actor Phil Morris on a little blue trolley we could paint out. It was the shot where he floated from the background to the foreground; that was the only shot where you saw him head to toe floating through the shot."

"We liked little things like the alien spaceship floating past the window. It provided this perfect setting for much of the action in the episode, and the effect was one that was approved by the producers straightaway."

"The flashlight on a wire just to give her the idea, and they just decided to do it that way!"
ON SCREEN

TRIVIA

Jeff Aile, who played the Vaadwaur scientist Gedrin in ‘Dragon’s Teeth,’ had previously portrayed Ensign Daniel Sutter (pictured below) in ‘Imaginary Friend.’ Similarly, Robert Knepper, who co-starred in ‘Dragon’s Teeth’ as the Vaadwaur military leader Gaul, had previously portrayed Wyatt Miller in ‘Haven.’ His character was a human physician, who was due to marry Deanna Troi before he had a change of heart.

Footage from ‘Dragon’s Teeth’ showing a building being blown up by a missile was later reused in the alternate credit sequence on STAR TREK: ENTERPRISE. Specifically, it was the two-part episode ‘In a Mirror, Darkly,’ where a Terran ship fires on an alien world (pictured below).

‘Dragon’s Teeth’ was originally going to be a two-part episode, but when writing the screenplay, Brannon Braga and Joe Menosky decided it would work better as a single episode.

APPEARANCES

Vaadwaur Fighter

FIRST APPEARANCE:

‘Dragon’s Teeth’ (VOY)

TV APPEARANCE:

Star Trek: Voyager

DESIGNED BY:

Tim Earl

KEY APPEARANCES

Star Trek: Voyager

‘Dragon’s Teeth’

The U.S.S. Voyager NCC-74656 is pulled into a subspace corridor and travels more than 200 light years in just five minutes before it is rescued by a Turei ship. The Turei demand to be let on Voyager to delete all data regarding the corridor, but when Captain Janeway refuses, the Turei attack. Voyager is forced to flee to a nearby planet that has been devastated by radiation caused by a war. On the planet, the crew find some people still alive in stasis pods. Once revived, these people, known as the Vaadwaur, explain that they discovered the corridors, which they used for trade until they were attacked by numerous aliens, including the Turei.

The Vaadwaur had planned to be reawakened after five years, but they find they have been in stasis for nearly 900 years. The Starfleet crew vow to help them until Neelix and Seven of Nine uncover records that the Vaadwaur were once ruthless conquerors.

When Janeway orders most of the Vaadwaur assault fighters to be disarmed, the Vaadwaur turn against them and attack Voyager. Suddenly, Janeway has to turn to their former attackers, the Turei, for help if they are to leave the planet and survive.

FIRST APPEARANCE:

‘DRAGON’S TEETH’ (VOY)

TV APPEARANCE:

STAR TREK: VOYAGER

DESIGNED BY:

Tim Earl

CONCLUSION

‘Dragon’s Teeth’ was originally going to be a two-part episode, but when writing the screenplay, Brannon Braga and Joe Menosky decided it would work better as a single episode.

ON SCREEN

STARFLEET TUG

COMING IN ISSUE 140

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