Usdi and His Kind
An Introduction to an Exceptional Lifeform

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SPOILER ALERT
If you have not watched “Star Trek Continues, Episode VI: Come Not Between the Dragons”, we advise that you do so before reading the following article.

ORIGINS — COSMOZOA

Cosmozoa are rare space-faring nomadic organisms that require no atmosphere to survive. Most forms of cosmozoa are less than 10cm in size and are known by the nickname "space mites."

They are thought to have evolved from tiny arachnid-like extremophiles that originally lived on low-atmosphere planetoids, but were expelled from their home world on the ejecta of comet impacts.

The toughest survived, sustained on the water, amino acids and minerals present in the wayward comet fragments. They continued to adapt as still more impacts spread their progeny to other comets and asteroids. Some developed grasshopper-like biomechanical abilities to propel themselves off their ultra-low gravity temporary homes into space when conditions warranted moving on.

At least one group of these cosmozoa, now known as the Utana, augmented the electromagnetic capacity of their nervous systems to create energetic propulsion. Through successive generations, this became a powerful and unique form of internally generated bioenergy.

Utilizing a specialized structure emerging from their upper spinal cord, known colloquially as the “pulse dome”, the Utana can discharge this highly evolved form of multiphase electromagnetic energy to create wave patterns of amazing diversity, with an incredible dynamic range in amplitude.

They harness this unique wave-producing adaptation for a broad range of purposes, similar to the many ways Earth dolphins use sound, but on a much grander scale.

For the Utana, this includes progressive thrust (which, in the absence of atmospheric friction, allows travel at tremendous accumulative velocities), non-sonic echolocation, defensive shielding, light emission communication and brainwave communication. And, like dolphins do with sound, the EM pulses can also be used as weapons.

FIRST CONTACT

The crew of the U.S.S Enterprise NCC 1701, led by Captain James T. Kirk, was the first in Starfleet to encounter this type of cosmozoa. On stardate 6257.4, a lone Utana male, traveling at near light speed, rammed right through the primary hull of the Enterprise. First thought to be a meteoroid, this individual protected itself with a self-generated energy field, which proved an effective sensor shroud, blocking deflector detection.

Through reports of continuing wall breeches, Captain Kirk quickly realized the Enterprise had been boarded. The intruder was tracked down, but still tried to hide using its sensor shroud. When startled, it stood, measuring a full 2.3 meters in height.

By using the Universal Translator, though there was initially some difficulty (see COMMUNICATION below), they were able to ascertain that this individual was only a child, a frightened runaway known as “Usdi”.

COMMUNICATION

As the Universal Translator works by comparing brainwave patterns to universal ideas and concepts it recognizes as common to intelligent life, it does not require vocal speech. It does use it when available, however, to reconstruct language by comparing sound patterns to simultaneous brainwave emanations of the speaker.

Brainwave patterns tend to be electromagnetic in origin, and the Utana are very skilled in precisely how these emanations are released or hidden.

Usdi used sound to speak while aboard the Enterprise because he heard the crew doing that. But the Utana rarely employ sound-based speech (which is useless in the vacuum of space), so Usdi was largely going on instinct and distant memories, voicing a clumsy and inconsistent "baby-talk".

But he was simultaneously using a low-amplitude version of his normal EM pulse-based language. The mixture of inconsistent vocalizations, shrouded brainwave energy, and unfamiliar pulse emanations hampered the effectiveness of the Universal Translator. Luckily, Lt. Uhura and Commander Spock were able to program it to selectively disregard inconsistent parts of Usdi's sound-based language and preferentially analyze the pulse pattern emissions, then re-create them electromagnetically to communicate back to Usdi.

The same technique was later used to communicate with Usdi's father outside the Enterprise, employing the deflector dish to emit an amped up version of the electromagnetic pulse patterns into space.

MOOD COLORS

When used just for basic brainwave communication or echolocation, the Utana’s pulse energy is not generated in the visual light spectrum. However, when the waves are discharged as an attack, they usually carry with them an intense emotional signal and are emitted in the visible red portion of the spectrum.

Color plays a big part in communicating basic emotions among the Utana. For example: submissive fear is conveyed by blue; actionable anger (which often contains some element of fear, as in a barking Earth dog) is conveyed by red; contentment, or a kind of a neutral calm, is conveyed by yellow.

These colors aren't necessarily sent out as wave pulses, but show themselves in the illumination of the eyes and the pulse dome. This illumination is often modulated by the rhythms of one or more of their many hearts.

BIOLOGY & DIET

The Utana have seven hearts distributed throughout their bodies, which beat independently and often at different rates. This allows them to better regulate blood pressure and internal temperatures when their bodies are exposed to extreme temperature differentials common in space, chiefly when within range of the heat influence of stellar radiation.

They have no lungs, but can passively absorb atmospheric gases when available through specialized, closable ports around their neck.

The Utana have very high blood-salt levels, primarily to support the extreme nerve transmission demands of their pulse dome.

The Utana definitely reflect the adage “You are what you eat.” Because they actually feed on comets and asteroids, their basic body composition and appearance is very similar. This is why during the first encounter, Commander Spock initially thought Usdi was a meteoroid.

Their exoskeletons are extraordinarily tough. Composed of complex living polymer chains interwoven with infrangible metals and minerals, their external armor protects them against damage from encounters with high velocity dust and meteoroids. Combined with their own self-generated EM shielding, it also makes them nearly impervious to most forms of stellar and cosmic radiation.

Though the diet of the Utana consists primarily of the water, amino acids, metals and minerals they extract from comets and asteroids, they can also obtain sustenance from meteoroids and even space dust.

Their massive arms, pincers and mandibles are well suited to fracturing, crushing and pulverizing the chunks of asteroid they ingest.

Even a short list of the metal ores, minerals and volatiles available to the Utana from these sources illustrates the richness and complexity of their nutrition: aluminum, cobalt, gallium, germanium, gold, iridium, iron, magnesium, nickel, platinum, silica, troilite, zinc, plus carbon, hydrogen, nitrogen, oxygen, sulfur and water, as well as a stunning array of both proteinogenic and non-coded amino acids.

SIZE & AGE

Compared to most known organisms, the Utana live very long lives. Though their maximum lifespan is unknown, many that have been studied have already survived for millennia.

Likewise, no one knows their maximum possible size, but they appear to continue growing throughout their lifetime. Their growth rate seems to slow as they approach 60 meters in length, but individuals have been known to reach over 200 meters.

FAMILY AND LIFESTYLE

The Utana are a generally peaceful, family-based species. Their small family units often consist of both parents and the most recently born child. But, as with humans, family composition varies widely. As the adults don't always mate for life, sometimes only one parent raises their child. Alternately, though less common, the family units can be larger, including not only both parents, but grandparents and two or three generations of offspring.

Most adult Utana females give live birth to a single, tiny, but mostly developed infant only once every century. This interval times with the fact that their young are dependent on at least one parent for that long.

The newborns are less than 1 meter in length, and grow approximately 1 meter every 2 decades. The young are primarily bipeds, the curved hook-like horns on their legs allowing them to more easily grip icy and rocky surfaces on low gravity planetoids, asteroids and comets. As they grow into adulthood, their arms, torso and pulse dome become proportionately larger, while their legs become proportionally smaller, until they can no longer be used for walking or standing.

Like their space mite relatives, the Utana are nomadic, staying on an asteroid or comet only as long as it can meet their comfort and nutritional needs. Physics prevents them from traveling at lightspeed or beyond, but they have been clocked at 850 million km/h (about 3/4 the speed of light). This consumes a lot of energy, however, so their normal roaming speed is about half that.

As the Utana wander, they frequently stop to feed and sleep on the sub-planetary bodies they seek. These docking periods can last from weeks to decades, and occupy the vast majority of their time. Thus it requires some 100 Earth years on average for the Utana to travel from one star system to another.

But generation after generation, they have spread to countless new star systems, and will likely continue to do so into the foreseeable future.

RECOGNITION

As a Federation-recognized species, the Utana were officially named *Utana taylori* by Commander Spock in honor of Ensign Eliza Taylor, the first human to encounter — and communicate with — an Utana.

Ensign Taylor went on to study and work with the Utana, contributing enormously to our knowledge and understanding of these remarkable beings.