

SPASH ASTRONOMY – WEEK 2

DRACO, CEPHEUS, CASSIOPEIA

Mythology of the constellation Draco

As with so many constellations, there is no one definite mythological dragon represented by DRACO, but rather several possibilities, including that of the Biblical serpent that tempted Eve in the Garden of Eden.

Another version concerns the war between the Titans and the gods of Mount Olympus. Legend has it that the extremely fierce Titans, who had feet resembling serpents' tails, attempted to free some of their brothers, imprisoned by Zeus, by hurling rocks from mountain tops at the gods. After a prolonged battle, Athena, goddess of wisdom, stepped in. She grabbed one of the Titans and threw him into the heavens, where he remains to this day.

Legend also connects DRACO to the dragon which appears in the story of one of the labours of Hercules. His task was to steal the golden apples from a tree given by Gaia to Hera on the occasion of her marriage to Zeus, a task of great difficulty since the tree was guarded by a monstrous, hundred-headed dragon. Hercules eventually overcame the problem, killing the dragon with his spear and then enlisting the help of Atlas. Condemned to carry the world on his shoulders as a punishment, Atlas willingly undertook to gather the apples in return for Hercules taking over his burden for a short while. A final tale suggests that DRACO represents the dragon killed by Cadmus, brother of Europa. After his sister had been abducted by Zeus, disguised as a bull, Cadmus was ordered by his father to go in search of her and not to return without her. After travelling the whole world without success, and unable to return to his homeland, Cadmus decided to build a new city near to a cave with several springs. However, when his companions entered the cave to collect water, they were all killed by a fearsome dragon that lived there. Cadmus then went into the cave alone and managed to slay the creature with his spear. He was ordered by the goddess Athena to plant the dragon's teeth in the ground, and from these teeth grew warriors who fought with each other until only five were left standing. These remaining five, together with Cadmus, became the founders of the city of Thebes.

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| 1. (alpha) Thuban (Arabic title for the whole of Draco) | magnitude 3.6 | pale yellow |
| 2. (beta) Rastaban (the Dragon's Head) | magnitude 2.78 | yellow |
| 3. (gamma) Eltanin (also means the Dragon's Head) | magnitude 2.22 | orange |
| 4. (lambda) Giansar (the Central One, as it is nearly midway between the Pointers and Polaris) | magnitude 4.1 | orange |
| 5. (xi) Grumium (the Dragon's under jaw) | magnitude 3.8 | yellow |

Mythology of the constellation Cepheus

This constellation represents King Cepheus of Ethiopia. Although probably best known as the husband of Queen Cassiopeia and father of Andromeda, he was also one of the Argonauts who travelled with Jason in search of the Golden Fleece. On this epic journey he was accompanied by either one or several of his sons (there are differing accounts as to the number).

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| 1. (alpha) Alderamin (the Right Arm) | magnitude 2.5 | white |
| 2. (beta) Alfirk (the king) | magnitude 3.3 | white |
| 3. (gamma) Alrai (the Shepard) | magnitude 3.5 | yellow |
4. (delta) Delta Cephei is one of the most famous of the variable stars. All stars that change their brightness like Delta Cephei are called "cepheids". Stars like this are actually pulsating themselves unlike the variables that vary because of a revolving companion moves in front of it. Delta Cephei changes its brightness from to 3.6 to 4.3 in 5 days 8 hours and 48 minutes. Delta Cephei (like all the cepheids) is a supergiant. The importance of cepheids is that once their absolute and apparent magnitudes are determined their distance is easy to figure out. The first Cepheid discovered in what was thought a star cluster in Andromeda turned out to be over 2.5 million light years away, thus galaxies were discovered. Thus cepheids are called the "measuring sticks of the universe". Delta Cephei is a little over 1000 LY away from us.

Cassiopeia, the wife of King Cepheus, ruler of Ethiopia, was beautiful, arrogant and vain, and it was these latter two characteristics which were to lead to her downfall. Her continual boast that both she and her daughter Andromeda were more beautiful than the sea nymphs, daughters of Nereus, the sea god, brought the wrath of Poseidon, ruling god of the sea, upon the kingdom of Ethiopia. (Differing accounts state that either Cetus, the sea monster, on Poseidon's instructions, was to destroy the land, or that the whole country was to be flooded.) Trying to avert such a fate, Cepheus and Cassiopeia consulted a wise oracle, who told them that the only way to appease the sea gods was to sacrifice their daughter. Accordingly, Andromeda was chained to a rock at the sea's edge, and left there to helplessly await her fate at the mercy of the sea monster. But Perseus arrived in time and saved Andromeda. Poseidon considered that Cassiopeia should not escape punishment entirely, and placed her in the heavens in such a position that she circles the celestial pole in an upside-down position for half the time.

7. **SEGIN (Epsilon Cassiopeiae).** At the eastern end of the "W" that makes Cassiopeia, and at the top of her "Chair," lies third magnitude (3.38) Epsilon Cassiopeiae, appropriately the fifth brightest star in the constellation. The star is a sparkling blue-white class B (B3) giant, but is sometimes listed as a peculiar B3 dwarf. At least the distance of 440 light years is fairly secure
- Cassiopeia (The Queen and Wife of Cepheus)** | Home | Help

