Kelsey Oseid

What We See in the Stars: An Illustrated Tour of the Night Sky

United Kingdom, United States (2017)

TAGS: Argo Argonauts Centaur(s) Cronus / Kronos Egypt Europa Gods
Golden Fleece Greek Art Greek Astronomy Greek History Hera Heracles
Hermes Jupiter Latin (Language) Laurel Wreath Mars Mercury Neptune Pan
Pegasus Perseus Poseidon Twelve Labours of Heracles Unicorn (hippos
monokeras) Zeus





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General information	
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Creators



Kelsey Oseid (Author, Illustrator)

Kelsey Oseid is an artist and illustrator based in Minneapolis, Minnesota, USA. Her work focuses on science and on human interaction with nature. Kelsey designs art prints of fauna and flora with her husband, Nick Wojciak.

Sources:

kelzuki.com (accessed: September 2, 2019).

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Additional information

Summary

What We See in the Stars is an informative work which uses attractive illustrations and clear language to communicate about the science of space, the history of space science (including ancient science), and the mythology connected to that science. The work is explicit at the start about its mission to teach science and mythology. It begins by explaining that knowledge of the stars was initially important for agriculture and navigation, and that modern star-gazing is a way to connect with "an ancient human experience" (p. 7). Mythology is presented as part of the rich history of space exploration; something that connects us to our past. The sections of the book are as follows:

Introduction

Where we are in Space

the Constellations:

- Bright Stars
- Precession and Shifting Pole Stars
- The Ecliptic

Ptolemy's Constellations:

- Andromeda the princess
- Aguarius the water-bearer
- Aguila the eagle
- Ara the altar
- Argo Navis the ship Argo
- Aries the ram
- Auriga the charioteer
- Boötes the herdsman
- Cancer the crab
- Canis Major the greater dog
- Canis Minor the lesser dog
- Capricornus the sea goat
- Cassiopeia the gueen
- Centaurus the centaur
- Cepheus the king
- Cetus the sea monster
- Corona Australis the southern crown
- Corona Borealis the northern crown





- Crater the cup
- Corvus the crow
- Cycynus the swan
- Delphinus the dolphin
- Draco the dragon
- Equuleus the little horse
- Eridanus the river
- · Gemini the twins
- Hercules the hero
- Hydra the sea serpent
- Leo the Lion
- Lepus the hare
- Libra the scales
- · Lupus the wolf
- Lyra the lyre
- · Ophiuchus the serpent-bearer
- · Orion the hunter
- Pegasus the winged-horse
- Perseus the hero
- · Pisces the fishes
- Piscis Austrinus the southern fish
- Sagitta the arrow
- Sagittarius the archer
- Scorpius the scorpion
- Serpens the serpent
- Taurus the bull
- Triangulum the triangle
- Ursa Major the great bear
- · Ursa Minor the lesser bear
- Virgo the virgin

The Modern Constellations

- Tools, Art, and Technology
- Animals and Mythical Creatures
- Other Modern Constellations

the Milky Way

the Moon:

- Phases of the Moon
- Disk Sizes





- Tidal Locking
- More Moon Phenomena
- Lunar Maria
- Full Moon Names

the Sun:

- Sunlight is Starlight
- Lunar Eclipses
- Solar Eclipses
- The Aurorae

the Planets:

- Wandering Stars
- Mercury
- Venus
- Earth
- Mars
- lupiter
- Saturn
- Uranus
- Neptune
- · Outer Objects

Asteroids, Comets & Meteors:

- Comets
- Meteors
- Asteroids

Deep Space:

- Messages for the Stars
- Voyager Interstellar Mission
- Deep Space
- Nebulae
- Is There Anyone Out There?

The section detailing constellations (pp. 11–86) offers a combination of scientific information and background on the myths that provided their names. They are laid out alphabetically. Some of the explanations of myth are brief, others add further information or even a little interpretation. Andromeda is described as playing 'damsel-in-distress'





to the hero Perseus', although she became 'queen and the mother of nine children - so maybe she wasn't so frail after all' (p. 24). The Brightest Star feature gives the Arabic names for stars in addition to the Latin names, and the Arabic names are frequently explained in the main text as well, e.g. Sadalsuud, the Arabic name for Beta Aquarii in Aguarius is described as meaning 'the luckiest of the lucky' (p. 25). The entry for Capricornus explains the cultural overlap of ancient Greeks who connected it with horned Pan, ancient Sumerians who had connected it with a goat fish, and the Arabic name of its brightest star, Deneb Algedi', 'the goat's tail' (p. 35). The Corona Australis entry explains the importance of wreaths in Greek antiquity, and the following entry for Corona Borealis extends this by referring to the several myths that the crown can refer to (pp. 40-41). This section as a whole expresses the great variety of material within ancient Greek mythology (as well as its differences from or similarities with other mythologies).

The section on planets (pp.115-137) combines scientific and mythological information. The planets discussed are the five planets that early astronomers knew of: Mercury, Venus, Mars, Jupiter, Saturn; plus Earth, and Uranus and Neptune the other two planets which are visible from Earth by telescope but discovered post-antiquity. Some descriptions comment on Greek gods behind the Romans names, although not all. Most then have a brief description of the spheres of influence of each deity. Mercury's description explains that the name was chosen because the planet rotates so rapidly around the sun that that suited Mercury, 'known for his speed' (p. 119), although his role as a messenger and Greek name go unmentioned. Venus is described as 'the Roman goddess of love and beauty'; the fact that the features of Venus 'are named after important women from countries and cultures around the world' is also referred to, with examples: Harriet Tubman and Lakshmi, 'the Indian goddess of love and war' (p. 121). The Saturn section refers to the prevalence of Titan names amongst moons, describing Titans as 'the proto-gods and -goddesses of Greek mythology' (p. 129). There is reference to Olympus Mons on Mars taking its name from Mt. Olympus, 'the tallest mountain in Greece and the mythological home of the Greek gods' (p. 125). Jupiter's Greek counterpart is named; Jupiter is described as 'the Roman god of the sky and thunder, and king of the Roman pantheon (analogous to the Greek god Zeus)'. There is also reference to Zeus' 'cruelty' (p. 127). There is more discussion of antiquity on the Uranus section: 'Uranus is named after the Greek god of the sky, Ouranus (known as Caelus in Roman



mythology) making it the only planet... named after the Greek iteration of a god rather than a Roman one'. The relationships between Uranus, Saturn, and Jupiter is then explained, and the result that diagrams of the planets are 'like a kind of family tree' (p. 131). Neptune's Greek equivalent is named, as is the connection between Neptune and its moons, 'named after minor Greek water gods' (p. 133).

The illustrations, rendered in a semi-realistic, informal style, are a major feature of the work. This is particularly the case in the planet section (p. 118+), in which each planet is shown with the deity imposed over the surface. Mercury features the god running, wearing his winged hat, winged shoes, and carrying the caduceus. Venus is shown kneeling, surrounded by bounteous hair and holding a flower and a bird in her hands. Earth is shown with the green land formed into the shape of a woman, although it is explained that this is the one planet not named after a Greek or Roman deity. Mars is shown wrapped in a cloak, wearing an ancient-style helmet, holding a spear. Jupiter is an angry heavily-bearded god holding a thunderbolt whilst slouched on his throne. Laurel-wreathed Saturn has crops wrapped around his wrists and forming an arc above his head. Uranus appears ethereal with gases swirling around his head. Neptune has seaweed growing from his head; he has a crown of bubbles and sports his iconic trident and a baleful look.

Analysis

Considerable attention is given to the naming of space features. It is explained initially that constellations have 'ancient-sounding names' from 'now-dead languages' (p. 13) – arguably an unfortunate choice of expression drawn from the author's background in science rather than history. Ptolemy the Geographer and his role in codifying constellation names is explored (p. 14 with p. 22); and there is more later on about the Greek, Latin, and Arabic roots of names, as well as the earlier origins of the groupings (p. 17). No date is given for the period in which Western Europe had 'their dark ages' in contrast to the 'Islamic Golden Age', but typically dates are provided and it is a welcome feature that Arabic traditions are included in the history of science sections. The addition of constellations in the modern period, building on Ptolemy's work, is explored later (p. 73).

There is attention to etymology throughout, such as 'planet' from the Greek expression for 'wandering star' (p. 20); the Greek etymology of 'comet' deriving from their appearance of having 'hair' (p. 139);





'asteroid' from the ancient Greek assumption that this was a form of 'star' (p. 144); the Latin influence on 'sol-' terms (p. 108-109). Many mythological terms and connections are explained (on which more below), but not all; the section on the Milky Way discusses its language history but not the myth of Hera's milk (p.89); reference to Pluto being 'tidally locked' with Charon does not explain mythical connection (p. 99); nor, initially, is Jupiter's myth-based link with its moon Europa (p. 123), although this receives some comment later: Jupiter's moons are named after 'figures subjected to Zeus' cruelty: Callisto, Europa, Ganymede, and Io' (p. 127; with p. 26, Zeus transformed to 'trick and kidnap Ganymede'). The myths are not repeated although their interpretation is given unambiguously. It is also interesting to note that this discussion of 'Jupiter' switches to refer to 'Zeus's' cruelty, but it is a little hard to know how to interpret that switch; it is perhaps intended as a reference to the earlier (i.e. Greek rather than Roman) origin of the myths. The section on full moon names gives Algonquin tribes of North America's names for them (pp. 104-105). Asteroid names are explained in terms of 'characters from Greek and Roman mythology', but also those named more recently from other traditions, including places sacred to Native Americans and the names of fantasy authors (p. 145). The non-mythical names of constellations based on animals and technology are also listed. 'Indus the Indian' is described as a 'politically incorrect' name that could do with changing (p. 85); although this is not explained any further, it does suggest the cultural importance of names and the idea that names, or the perception of names, may change over time.

The book explains areas in which historical perceptions differed from modern ones. This is balanced by reference to a shared human experience, particularly 'false pattern recognition' – a deeply held human desire to see 'a pattern – a meaning' and something recognisable, which led to many cultures developing sets of constellations despite their constancy being essentially illusionary (p. 16). 'Celestial sphere' theory is explained, along with the idea of gods looking on (pp. 14–15); the difference between geocentrism and solarcentric views is explained (p. 21); it is explained that the ancient Egyptians had different north polar star to us - they had Thuban and seem to have aligned pyramids with it (p. 18). There is reference to the ancient practice of recording celestial phenomena; the first recorded sighting of Halley's Comet in 240 BCE is mentioned although details of where it was recorded are not given. Philosophical or religious ideas linked to celestial phenomena are also alluded too, and these allusions



mention a variety of cultures, not only ancient Greek. Ancient Greek and ancient Chinese ideas about eclipses are mentioned (p. 111), as are Aboriginal Australians' interpretations of the aurorae (p. 113), and many cultures' interpretation of planets seeming to change direction as a bad omen (p. 119). These references help to convey the ways in which pre-modern societies bestowed meaning upon the movements of the stars and planets, and to express the idea that many cultures responded sometimes in different ways but often in similar ways.

The summaries of myths related to constellations offer enough to give young readers a basic sense of the stories and their importance throughout the history of science, while potentially encouraging readers to explore these traditions in further detail. Given the importance of Orion within Minoan astronomical culture this reviewer would have been keen to see that myth and its scientific legacy explored in further detail (he is referred to as 'a hunter', the son of Poseidon, but his importance in star-gazing practice and the relation with Taurus is not explored); nonetheless, that is a personal preference and other readers may find their way to that area of study through an interest sparked by What We See in the Stars.

The section on planets includes brief explanations of the gods they are named after. The discussion of their Greek-Roman origins is a little inconsistent. Mars, for example, is referred to as the 'Roman god of war (analogous to the Greek god Ares)'. This is a curious choice as the overlap between Mars and Ares is less than that of Mercury-Hermes, Venus-Aphrodite, or many other Greco-Roman pairings who's Greek origins are not given, nonetheless, it adds a little extra depth to the picture. Similarly Saturn is described as 'the Roman god of agriculture (analogous to the Greek god Cronus') although this is not a very precise fit (p. 129), while it nonetheless provides an indication of how much there is to explore in ancient religion.

The personifications in the illustrations of planets help to express the individual natures of the planets and their related deities, connecting the reader with the ancient traditions and helping to make the distinctions between the planets more memorable. There is also a beautiful full-page illustration of Ptolemy, which helps to establish him as an individual of significance and as a real person (p. 23). The illustration of the Milky Way is created by combining the many names for that phenomenon as used all over the world in many cultures (pp. 90–91). Greco-Roman culture plays a special role in this work as the culture which has done most to establish the roots of modern



astronomy, however the author has been open about the scientific limits of that culture in terms of astronomical knowledge, and about the great range of cultures which have or had knowledge of astronomy and which has also contributed to shared human understanding of space.

Classical, Mythological, Traditional Motifs, Characters, and Concepts Argo Argonauts Centaur(s) Cronus / Kronos Egypt Europa Gods Golden Fleece Greek Art Greek Astronomy Greek History Hera Heracles Hermes Jupiter Latin (Language) Laurel Wreath Mars Mercury Neptune Pan Pegasus Perseus Poseidon Twelve Labours of Heracles Unicorn (hippos monokeras) Zeus

Other Motifs, Figures, and Concepts Relevant for Children and Youth Culture <u>Environment Gaining understanding Heritage Historical figures History</u>
<u>Knowledge Learning Multiculturalism Names Nature Past Religious</u>
beliefs Science

Further Reading

Evans, J., *The History and Practice of Ancient Astronomy*, London: Oxford University Press, 1998.

MacGillivray, Alexander, "The Astral Labyrinth at Knossos", Knossos: Palace, City, State conference, Herakleion, Crete, Nov. 15–18 2000, *British School at Athens Studies* 12, (2004): 329–338.

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