COMA BERENICES

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…the beauteous hair, that lately shed
Refulgent beams from Berenice's head;
The lock she fondly vow'd with lifted arms,
Imploring all the powers to save from harms….
—From The Hair of Berenice, Catullus 1st c. BC
(trans. Tytler 1793)

Reigning high overhead on clear spring evenings a grouping of stars catches the attention of even casual night-sky observers. This is Coma Berenices, one of the brightest star clusters and a constellation named after an ancient queen. The main star pattern consists only of three 4th-mag. stars, which appear as an upside-down right angle, but despite the dim setting, the region includes three globular clusters and objects from all Deep-Sky Observing Certificates.

The story of Coma Berenices is rare in constellation lore, based not on myth but a real person, Queen Berenice II of Egypt, who, according to Hyginus, is said to have promised a lock of her long amber-coloured hair to Aphrodite if the king returned safe from war. Upon his return, she placed a lock in the temple; however, in the morning it was gone, making the king anxious. The quick-thinking court astrologer, Conon, to advance his career, declared that Aphrodite was so impressed with the gesture she placed the hair among the stars.

Now catalogued as the open cluster Melotte 111, from the Explore the Universe program, the cluster is still most popularly known as Coma Berenices. Ptolemy described it as a "nebulous convolution which is called Coma Berenice" located "between the outermost parts of Leo and Ursa Major," including the stars Gamma, 7, and 23 Comae Berenices, which he suggested was "shaped like a leaf."

Before Coma Berenices, the region was seen as a sheaf of wheat held aloft by Virgo. We see the transition in Bayer's 1603 Uranometria where a Wheat Sheaf is depicted on chart 5 and Berenice's Hair on chart 2, and all major astronomical charts thereafter. Spanning over 5° of sky and shining at mag. +1.8, Melotte 111 is perfect for 7× binoculars, and with many orange, or yellow-white stars, it may appear faintly golden, perhaps even amber, to the naked eye.

Coma Berenices is also home to the North Galactic Pole (NGP), an invisible location less than 0.5 degrees south of the star 31 Comae. On the way from Mel 111 be sure to stop by NGC 4565, Herschel's aptly named "Needle Galaxy." Moving 2° south from the NGP, we find NGC 4725, a spiral galaxy, unique for its solitary spiral arm. From here, M64 lies about 1/3 of the way to Alpha Comae, even though in small telescopes a dark lane is easily observed, leading to its proper name "The Black Eye Galaxy." Sharing a 2° field with Alpha Comae (Diadem), we find two globular clusters. To observe both in a small telescope, first locate 8th mag. M53, and while staring directly at this object, use averted vision to see the Challenge Object NGC 5053. Six degrees north of Alpha is a galaxy chain of Deep-Sky Gems running from NGC 5016 to the west through NGC 4685, M85, NGC 4450, finally to NGC 4340. The third globular cluster is located at the far western edge of the constellation—the easily detected but difficult to resolve NGC 4147, a masquerader in this Realm of the Galaxies.

The Virgo Galaxy Cluster spans both Virgo and Coma Berenices, including the northern reaches of "Markarian's Chain" of galaxies and beyond, NGC 4473, 4477, and 4459. Low-power fields of 3.5° capture M88 and M91 to the northeast, then scanning west will bring M100, M99, and M98 into view. Now try for the Challenge Object Abell 1656, the Coma Berenices Galaxy Cluster. Centred around NGC 4889 and NGC 4874 exist many tiny fuzzy specs of remote galaxies.

It is fortunate that Queen Berenice was immortalized in the sky, because soon after this event, the king died and she was murdered. Coincidentally, the philosopher Aristotle wrote about hairy stars 100 years before Berenice was queen. He used the Greek word komē, "hair of the head," to illustrate the "luminous tail of a comet," objects long thought of as portenders of doom for powerful heads of state.

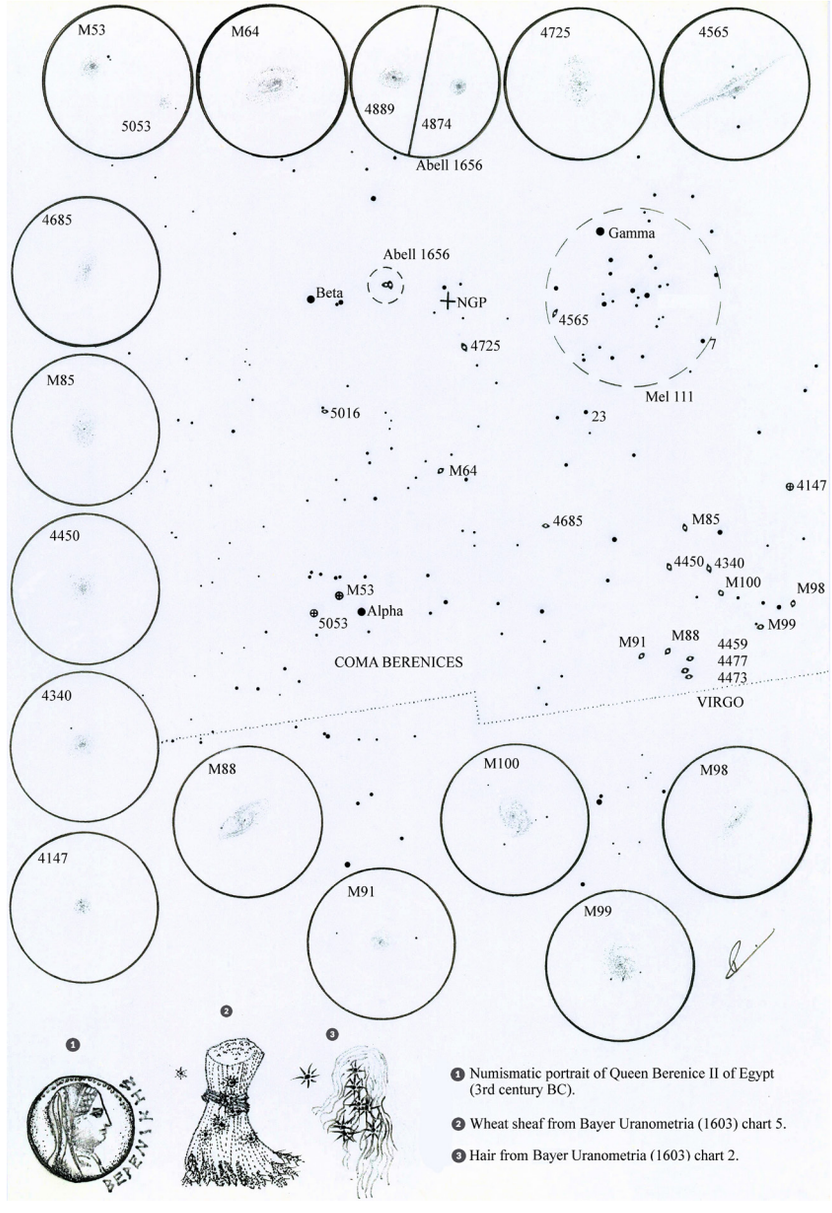

Diagram by Randall Rosenfeld