

# Deepsky Beauties: October 2009

*All objects in this article can be observed underneath a dark sky with telescopes with a maximum of 8 inch (20 cm). Most objects can already be observed with smaller scopes or binoculars.*

This month we'll take a closer look to some nice open clusters in the constellation Cassiopeia. The figure is all year visible on the northern hemisphere. It is easy to recognize as a large 'W' or, depending of the season, an 'M'.

Cassiopeia was, according to the Greek mythology, married with Cepheus, they where king and queen of Ethiopia. Together they had a daughter: Andromeda. Cassiopeia and her daughter where both very beautiful women and they made often other women jealous because of there appearance. They were even more beautiful than the Nereid's, the sea nymphs. This awoke the anger of Poseidon, god of the sea and he sent the sea monster Cetus to Ethiopia to destroy it. Cassiopeia and Cepheus where desperate and they asked a wise oracle for advice in the hope that they could save their kingdom. The oracle told them that there was only one way to save Ethiopia and propitiate the sea gods, and that was to sacrifice their daughter. Andromeda was tied to a rock near the shore and left alone where she helplessly waited for Cetus to come. When the monster emerged from the sea, the hero Perseus appeared and saved Andromeda's life.

Poseidon found that Cassiopeia may not avoid his punishment and he placed her in

the night sky, but in such a way that she stands upside down half of the time.

Let's see which gems we can find in Cassiopeia.

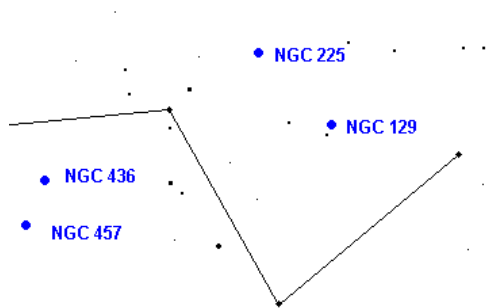
**NGC 129** is a nice open cluster. The group exists of about 10 to 30 bright stars, depending of the magnification you use. All of the stars are resolved and jumps out of the background. Observe this object with a moderate telescope for the nicest view.

**The Broken Heart Cluster** (NGC 225) is a real beauty! Through my telescope (8" Dobson) with a magnification of 31x, this cluster is large and fits just in my field of view. There are two half's visible, but the lower part of the heart (the tip) is missing. Instead of that you can see a small group of about 20 stars on the lower side of the broken heart. On the upper side between the curves of the two parts there are some stars in the shape of a circle. This makes the entire object looks like a charm that belongs on a necklace.

**The E.T. Cluster** (NGC 457) is also a nice open cluster. It's also called 'The Owl Cluster', but it looks strikingly to the famous alien E.T. The clusters stars are on the foreground, but only the middle of E.T. isn't. Here is at low magnifications dim a glow visible of unresolved stars. The stars in the cluster differ in brightness, especially the eyes of E.T. These are the brightest.

The open cluster **NGC 436** is small and has a round shape. The object has a size of not more than three faint stars sticking

together. However it's good to see that this is an open cluster and there are a lot of unresolved stars visible. Observe this beauty with a low magnification.



**NGC 637** is an open cluster with an original shape. The object looks like a sea star with the contours formed by bright stars. The imaginary lines between the stars are filled with a thick line unresolved stars. The centre of NGC 637 is black, caused by the absence of stars. One tip of the 'sea star' is filled with a glow of unresolved stars.

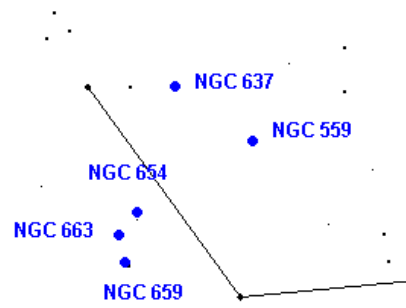
**NGC 559** is a really small open cluster with a bright core. Around the core you'll notice the glow of unresolved stars. If you look fast to this object and then focus your eyes to something else, this cluster looks like a globular. The stars in the surroundings of NGC 559 shapes a half heart which the open cluster forming the tip of the heart.

A small and compact cluster is **NGC 654**. Through the smaller scopes there is a small cloud with sparkling stars visible. By observing this object with averted vision, it is possible to resolve some of the stars. The object remains a bit granular though. NGC 654 is easy to find, because it is located just southeast of a bright 7<sup>th</sup> magnitude star.

The two clusters **NGC 663** and **NGC 659** can be seen in one field of view with not to high magnifications. NGC 659 is the smallest of this duo. There are some foreground stars visible, but the cluster can't be resolved entirely through the smaller scopes.

NGC 663 is larger. There are also more stars to resolve in this object than its

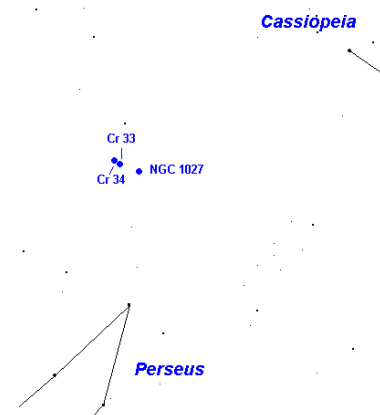
neighbor. The object has one bright star that catches the eye immediately. East of this star is a nice double star located. The cluster has an oblong shape.



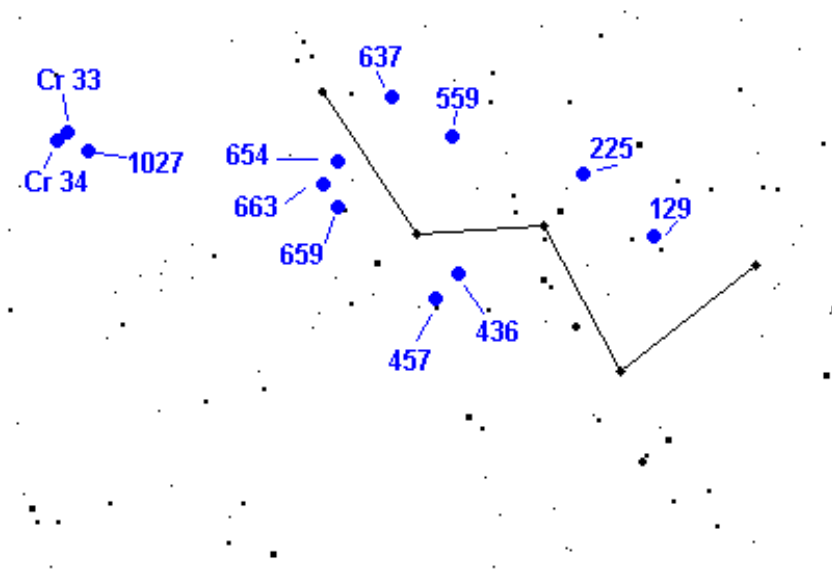
Two other nice clusters are **Collinder 33** and **Collinder 34**. They overlay each other. Because of this, it can be hard to identify them as two separate clusters. Cr 33 is the larger of the two and contains most stars. Through binoculars both clusters appear nicest. You'll notice a rich star field, this is Collinder 33.

A whole lot smaller, but still large, is Cr 34. It's located east of its neighbor. The cluster is a bit oval shaped and virtually sticks to Cr 33. If you have a binocular, this pair is definitely worth a visit!

We finish the month with **NGC 1027**. This is a relatively rich and prominent cluster. There is a lot of difference between the brightness of the stars. The brightest of the stars on the North side forms the letter 'S'. Observe the cluster with a medium sized telescope for the best result.



Have fun observing there nice objects!  
Demelza Ramakers (September, 30 2009)



Constell,	Object	Type	Magnitude	Size/sep	RA	Dec.
Cassiopeia	NGC 129	Open cluster	6.5	21' x 21'	00h30m00s	60°13'
Cassiopeia	NGC 225	Open cluster	7.0	12' x 12'	00h43m36s	61°46'
Cassiopeia	NGC 457	Open cluster	6.4	13' x 13'	01h19m33s	58°17'
Cassiopeia	NGC 436	Open cluster	8.8	6' x 6'	01h15m58s	58°49'
Cassiopeia	NGC 637	Open cluster	8.2	3.5' x 3.5'	01h43m03s	64°02'
Cassiopeia	NGC 559	Open cluster	9.5	4.4'' x 4.4'	01h29m31s	63°19'
Cassiopeia	NGC 654	Open cluster	6.5	5' x 5'	01h43m59s	61°53'
Cassiopeia	NGC 663	Open cluster	7.1	16' x 16'	01h46m02s	61°14'
Cassiopeia	NGC 659	Open cluster	7.9	5' x 5'	01h44m23s	60°40'
Cassiopeia	Cr 33	Open cluster	5.9	39' x 39'	02h59m18s	60°24'
Cassiopeia	Cr 34	Open cluster	6.8	24' x 24'	03h00m54s	60°25'
Cassiopeia	NGC 1027	Open cluster	6.7	20' x 20'	02h43m35s	61°36'