

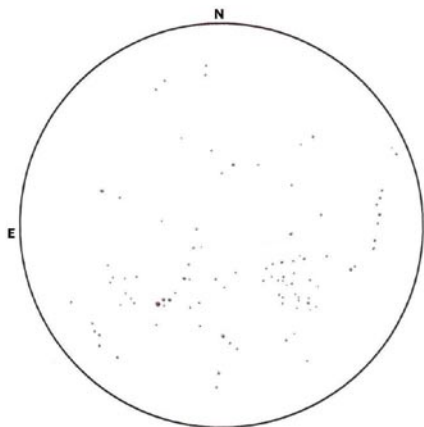


A Flame rises from the Altar

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According to tradition Ara was the altar used by Centaurus the Centaur to offer sacrifices of animal origin. Ara, ranked number 63 in terms of size, is located between Norma to the west and Telescopium to the east.

Fire and water are arguably among the most dramatic phenomena that form a part of our daily existence in this world. Fire is often seen as a symbol of destruction, yet the torch-bearer still speeds on his way. It is difficult for us to grasp the anxiety and chaos that humans of antiquity must have experienced when a human sacrifice was brought to the altar.



NGC 6204 is a well balanced cluster with about two dozen stars of mixed magnitude and the Hogg clusters.

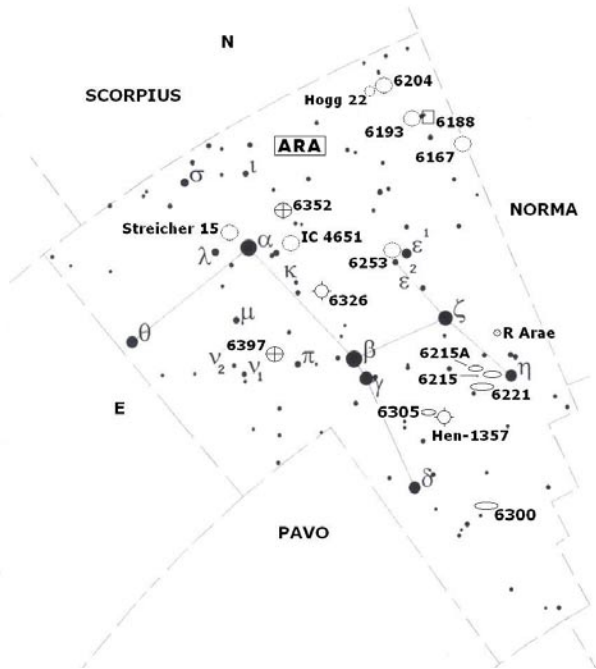


Image source: Stellarium.org

The north-western area of Ara is the obvious place to start if one wants to get to know more about this constellation. This part of Ara, nestling on the outskirts of the Milky Way, is very dense and rich.

A mere two degrees from the boundary with Norma and Scorpius is the open star cluster **NGC 6204** (*New General Catalogue of Nebulae and Clusters of Stars*). One of the most outstanding compositions with two groupings can be seen here. NGC 6204 is a well balanced cluster with about two dozen stars of mixed magnitude: brighter ones mingled with fainter ones. It is a lovely cluster displaying a tight centre and a notable double-star in the extreme south. The group **Hogg 22**, about 5 arc-minutes towards the east, resembles a tight knot of stars towards the southern point of a long string draped from north to south in a perfect half-moon shape. If one continues along this line, the stars become increasingly fainter, with the faintest one marking the end of the line at the northern point (see combined sketch with NGC 6204). However, Mati Morel, an Australian astronomer, has determined that Hogg 22 is a separate physical cluster

from NGC 6204, although some sources list the stars concerned as all in the same cluster, namely NGC 6204. Two more Hogg clusters can be found just further south: Hogg 20, situated on the southern brink of the cluster NGC 6200, which lies only 20 arc-minutes south of NGC 6204, and Hogg 21, only 20 arc-minutes further south-east from NGC 6200. Arthur Robert Hogg was born in Victoria Australia in 1903, and at the age of 43 he became an astronomer. Hogg graduated with a Masters of Science in 1925.

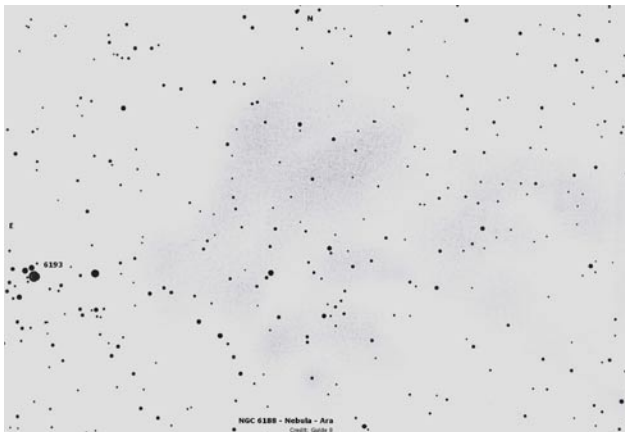


Continuing along the boundary between Ara and Norma southwards there is another interesting combination with

a cluster and a diffuse nebula. **NGC 6188** displays a range of nebulosity with shades from really dark to a light, flimsy haze. The almost transparent nebulosity

hangs on both sides of the darker nebula, which runs from north to south, with the eastern hazy section the brightest. The whole area is covered in smoke-like gas and dust, with small parts

NGC 6188 displays an almost transparent nebulosity. NGC 6193 in contrast stands out clearly.

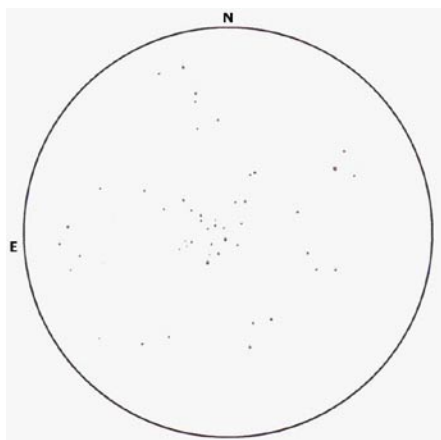


of the dark nebula quite well defined against the very dense star-field (see combine sketch with NGC 6139). Make every effort to search out very dark night sky conditions to appreciate this network of mixed dark and bright nebulosity to the full.

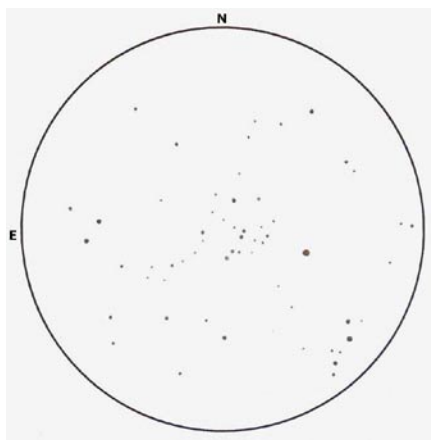
The cluster **NGC 6193** shines like an illuminated shopping centre on the south-eastern tip of this region covered in emission and reflection nebulosity. The cluster, with a few outstanding bright blue stars and a mist of fainter light points, is clearly demarcated and outstanding and could indicate a much larger group than anticipated. The beautiful double-star **DUN 206** (*Dunlop Catalogue*) is situated on the western edge of the cluster and contains two magnitude 6 and 7 blue stars with a separation of 10 arc-seconds in a position angle (PA) of 14.

A special cluster can be found a further 1.5 degrees south along the Ara and Norma boundary. **NGC 6167** is just a pretty open cluster with an outstanding shape. The group also known as **Bennett 79a**, displays a very prominent upside down or otherwise *W* shape, which could also be seen as a sort of zigzag running in a north-south direction (see sketch). Star clusters in different patterns and shapes can be very interesting and provide endless pleasure to the observer.

More or less towards the centre of Ara we find epsilon Arae, which can also be seen as the western supporting pillar of the altar dish. The open cluster **NGC 6253** is situated just 35 arc-minutes north from magnitude 4 epsilon¹ and magnitude 5.2 epsilon². The cluster, which is also known as **Bennett 84**, is a large, rich, swarming group of faint stars in an



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NGC 6253 is a large, rich, swarming group of faint stars in an elongated cone shape open cluster, and is also known as **Bennett 84**.

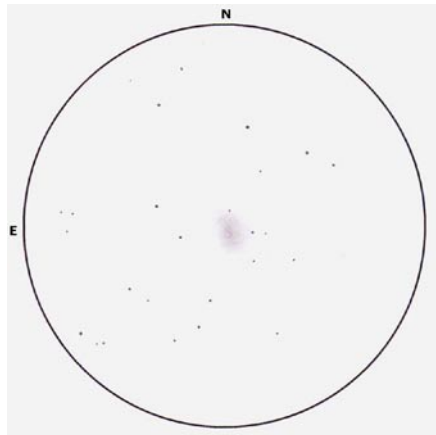
elongated cone shape spreading out from a point from east to west. Close to the western rim of the cup-shaped opening is a magnitude 9 star. The northern part of the cluster displays a slightly bulgy shape with a more flattened southern part. Although a faint attractive cluster of modest brightness, it does stand out against the background star-field (see sketch). With some imagination it is also possible to see it as the shape of an Australian kangaroo.

The star zeta Arae is situated 3 degrees further south of epsilon and is like no other star in this constellation. Although this orange star proudly displays a magnitude of 3 and represents the western part of the altar dish it is also very distant.

Still further south, halfway between zeta and eta Arae is the very interesting **R Arae** (HD149730 – *Henry Draper Catalogue*) the visual duplicity of which was discovered by John Herschel (HJ 4866) who called it ‘a beautiful star’. The star is in fact an Algol type system with HD149730A being an eclipsing binary with a magnitude varying between 6 and 6.9 over a period of exactly 4 days, 10 hours and 12 minutes. The companion star, HD149730B, of magnitude 8 is just 3.5 arc-seconds away to the south-east. But be particularly sharp in your observation, because the star-field surrounding this star is packed with stars of various magnitudes. It would be best to make use of a star map.

NGC 6215 is situated barely 10 arc-minutes east-north-east from the magnitude 3.8 eta Arae. A lovely orange-coloured star, which points the way to the galaxies we are dealing with in this constellation. If you can obscure the star, the galaxy, which displays a hazy oval shape and slightly brighter nucleus, will be easier to observe. What is not so easy to spot is the companion galaxy **NGC 6215A**, which is a further 12 arc-minutes eastwards and visible only as a faint, hazy smear of light.

The third galaxy in the field, and perhaps the easiest of the trio to spot, is **NGC 6221**, situated 25 arc-minutes south-east from eta Arae. The galaxy is fairly large and bright and appears to form an oval from north to south. Careful observation brings to the fore an uneven surface with a patchy feeling to it, which hints at a spiral structure. The nucleus is relative-



NGC 6221 is fairly large and bright galaxy that appears to form an oval from north to south.

ly bright, and with high magnification it brightens up to a stellar point. Strings of faint stars are wrapped around the western side of the galaxy (see sketch). This galaxy is about 70 million light-years away.

The stars delta and eta Arae are in a fiery line, as they represent the brim of the volcano-like cooking pot. A very special planetary nebula is situated virtually in the midst of the flames, so to speak, halfway between the two stars. This object is special, because it is one of Hubble's greatest images and bears the name Stingray Nebula, also known as **Hen-1357**. It is so named because it is the 1 357th object in a list of unusual stars compiled by astronomer Karl Henize in the 1960s. The planetary nebula is in the final stages of its life and one of the youngest known formed possibly as recently as 200 years ago and lies about 18 000 light-years away from us. The central magnitude 8.4 star (SAO 244567 – *Smithsonian Astrophysical Observatory*) has a companion at a position angle (PA) of 70. Hubble pictures of the planetary nebula show a ring of green coloured gas towards the centre. Curved red lines represent gas heated by a shock wind interacting with surrounding gas. The galaxy **NGC 6305** is situated only 25 arc-minutes towards the north-east and displays a soft, circular glow. However, two lovely yellow stars flank the galaxy on the south-eastern and north-western sides.

The magnitude 3.5 star delta Arae situated at the eastern part of the brim is also a double-star with the primary a super white and the companion with a slightly yellow tinge. The ringed barred spiral galaxy **NGC 6300** is situated 2.5 degrees south of magnitude 3.5 delta Arae. The galaxy displays a nice oval in a north-west to south-east direction. With higher magnification the surface hints some structure and a relatively bright bar-like nucleus.

Move away from this burning spot of the Altar into the eastern part of the constellation to discover Ara's showpiece, the globular cluster **NGC 6397**, situated towards the east of the two brightest stars alpha and beta Arae. This is an exceptional object with all the observing elements that one could find in a globular cluster. NGC 6397, also known as Bennett 98, is large, bright and round in shape. It has well-resolved star trails intermittently shaped like arms, as well as speckled dark sections in between. It appears slightly elongated in a north-west to south-east direction, which gives it a three-dimensional feeling. The globular cluster displays a mass of various magnitude stars with a few blue stragglers bunched together. The core impresses me most: it appears completely tight, but higher magnification reveals very faint pin-point stars barely visible. A smaller unresolved knot of faint stars can be seen towards the north-east edge. Three estimated magnitude 9 stars with a yel-

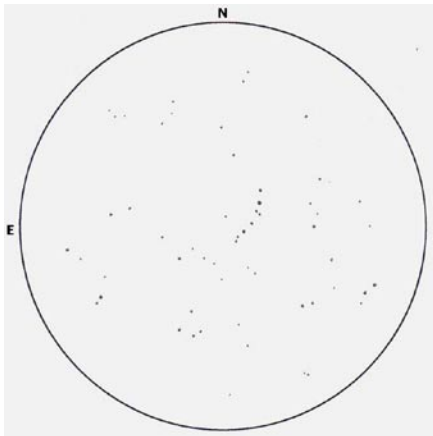
lowish tint found there home toward the southern periphery between star streamers. What a breath-taking naked-eye object, only about 8 700 light-years away!

Well out of the fiery danger zone, situated between the pillars that hold the burning altar pot, is the planetary nebula **NGC 6326** about 2.5 degrees south of alpha Arae. The planetary nebula displays a soft misty disc in a slightly grey colour. Higher magnification brings out a more defined round shape and can be “lifted out” from the background star-field with the help of an oxygen filter (O^{III}). An uneven half-moon string of stars runs from north to south on the eastern side of the planetary nebula for almost 10 arc-minutes long.

The exceptional silver metallic magnitude 3 alpha Arae is also a double-star with a magnitude 11 companion, a sepa-

ration of 55 arc-seconds and a position angle (PA) of 172. To have the brightest star as a close neighbour is quite something, and on top of that, an open cluster with a difference. **IC 4651** (*Index Catalogue*) is situated only one degree west of alpha Arae. The focus of the grouping is a very dense knot of stars towards the middle area, which also contains the most stars. The northern part displays a handful of brighter stars that mingle well with the fainter members. Again the southern and eastern parts of the cluster contain handfuls of faint stars that display a few nice strings in formation. Dark areas are very obvious between the cluster members. The cluster is well outstanding against the background star-field. Maybe it should be called the Patchy Cluster!

One of the first asterisms searched out during observations so far is also a close neighbour to alpha Arae and is situated 1.5 degrees north of the star. **STREICHER 15** (*Deep-sky Hunters Catalogue*) contains eight stars, with an average brightness of roughly magnitude 7 to 8 and is well defined against the star-field. The brightest star, magnitude 6.3, appears light yellow and visible to the north of the string of stars snaking southwards. A magnitude 10 double-star ends off the southern tip of the string (see sketch). Star strings may resemble different shapes, and to me this grouping resembles a swallow diving in flight. One could also see it as a Chinese hat.



Streicher 15 contains eight stars and is well defined against the star-field.

deep-sky delights

Another 2.5 degrees further west from the asterism is the globular cluster **NGC 6352**, situated inside the diffuse emission nebula GN 17.24.4 (*General Nebula Databank*). The globular cluster appears as a soft round smear, unresolved and embedded among the faint field stars. With averted vision it looks somewhat like blasted sand, and with higher magnification the identity comes to life with faint pin-point stars resembling frosted glass. The twinkling stars give this globular a glitter-ball effect, with a faint hazy outer envelope. With even higher magnification dark spots and thin dark lanes are visible in the slightly more compact centre, with noticeable star trails on the outer edges. The south-western part of

the cluster seems much “busier” with star light. James Dunlop discovered this magnitude 8 globular from Wales, Australia, and adds it as number 417 on his list. His remarks were: “Rather faint nebula, round figure, easily resolvable in slight compression of stars to the centre”. The globular cluster is also known as Bennett 94 and is approximately 25 000 light-years distant.

The stake and sacrifices have long died out, but the constellation Ara is a quiet reminder of a practice that justified such phenomena. Fortunately the constellation offers a wealth of splendid objects that will warm the heart on warm southern summer evenings. ☆

Object	Type	RA (J2000.0)	Dec	Mag	Size
NGC 6167	Open Cluster	16 ^h 34 ^m 4	-49°36'	6.7	7'
R Arae	Eclipsing Binary	16 39 7	-57 00	6 & 6.9	-
NGC 6188	Diffuse Nebula	16 40 5	-48 47	-	20'
NGC 6193	Open Cluster	16 41 3	-48 46	5.2	14'
NGC 6204	Open Cluster	16 46 5	-47 01	8.2	5'
Hogg 22	Open Cluster	16 46 6	-47 05	6.7	2'
NGC 6215	Galaxy	16 51 1	-58 59	10.9	2.7'x2.2'
NGC 6215A	Galaxy	16 52 8	-58 56	13.4	1.9'x0.6'
NGC 6221	Galaxy	16 52 8	-59 13	10.1	4.9'x3.2'
NGC 6253	Open Cluster	16 59 1	-52 43	10.2	5'
Hen-1357	Planetary Nebula	17 16 4	-59 29	-	-
NGC 6300	Galaxy	17 17 0	-62 49	10.1	5.2'x3.3'
NGC 6305	Galaxy	17 18 0	-59 10	13	1.8'x1.2'
NGC 6326	Planetary Nebula	17 20 8	-51 45	11	14'
IC 4651	Open Cluster	17 24 7	-49 57	6.9	12'
NGC 6352	Globular Cluster	17 25 5	-48 25	8.1	7.1'
STREICHER 15	Asterism	17 34 7	-48 35	6	17'
NGC 6397	Globular Cluster	17 40 7	-53 40	5.8	25.7'