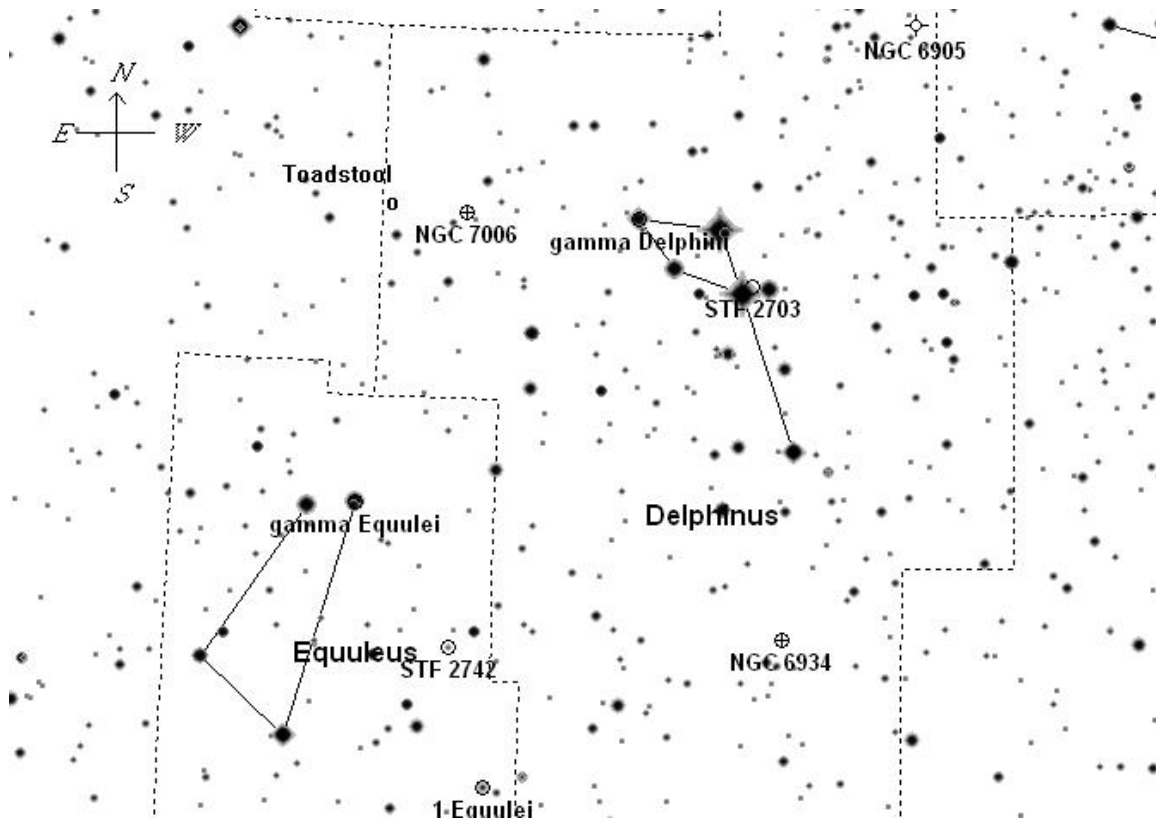


Cloudy Nights Telescope Reviews

Small Wonders: Delphinus and Equuleus

A Monthly Beginners Guide to the Night Sky

by Tom Trusock

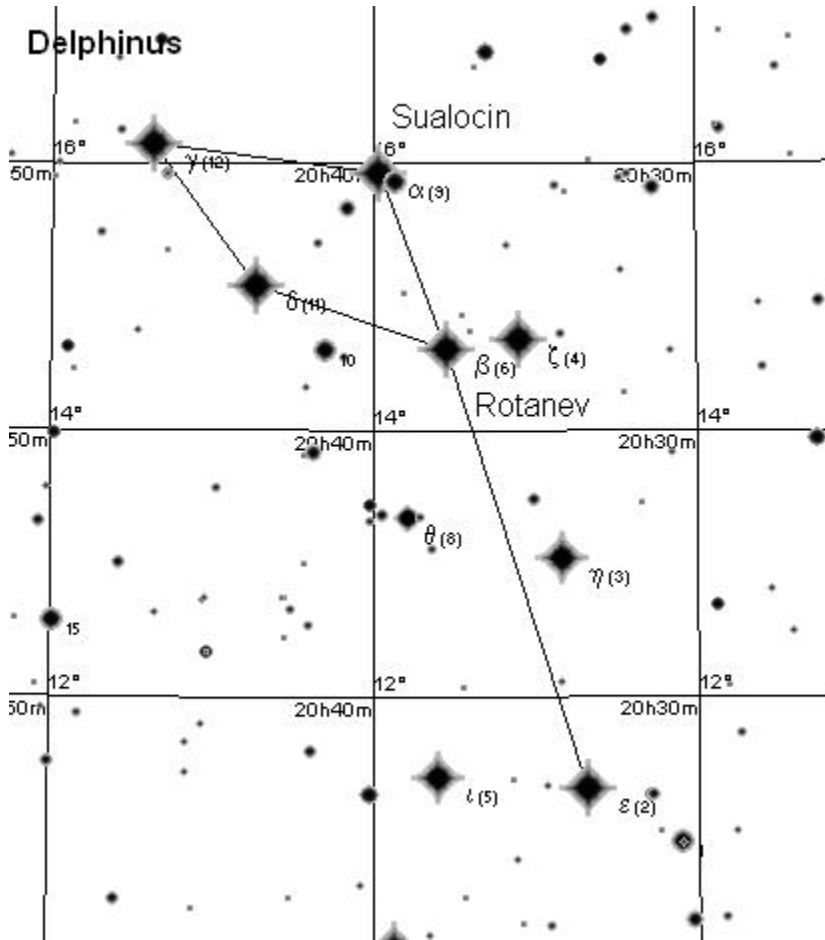


Wide field Chart

Target List	Name	Type	Size	Mag	RA	DEC
	1 Equulei	Multiple		5.3	20h 59m 19.1s	+04° 18' 40"
	gamma Delphini	Multiple		4.3	20h 46m 53.1s	+16° 08' 27"
	gamma Equulei	Multiple		4.7	21h 10m 34.7s	+10° 09' 00"
	NGC 6905	Planetary Nebula	1.2'	11.1	20h 22m 36.1s	+20° 07' 12"
	NGC 6934	Globular Cluster	7.1'	8.9	20h 34m 25.9s	+07° 25' 14"
	French 1	Asterism			21h 08m 01.1s	+16° 21' 16"
	STF 2703	Multiple		8.3	20h 37m 03.1s	+14° 44' 41"
	STF 2742	Multiple		6.7	21h 02m 26.8s	+07° 11' 50"
Challenge Object	Name	Type	Size	Mag	RA	DEC
	NGC 7006	Globular Cluster	3.6'	10.6	21h 01m 43.2s	+16° 12' 22"

Dolphins and Practical Jokes

This is something of a sparse piece of sky if you are only interested in looking for bright showpiece objects. For small scopes, there are a few nice deep sky targets in Delphinus, but little in Equuleus. In fact, for small scopes, the only thing that Equuleus really has to offer is some nice multiple stars. But, taking a page from Walter Scott Houston - there's something to be found even in the most barren area of the sky.



While there are at least three stories as to how Delphinus (the Dolphin) wound up in the night sky, there's something you might find a little more interesting about this constellation - something that revolves around a young man we'll call Nick Hunter. Something that was more than likely a practical joke - and a rather stellar one at that.

Do you know Nick Hunter?

Sometimes there's more than meets the eye in the stars. Take Alpha and Beta Delphinus for example.

Sualocin and Rotanev.

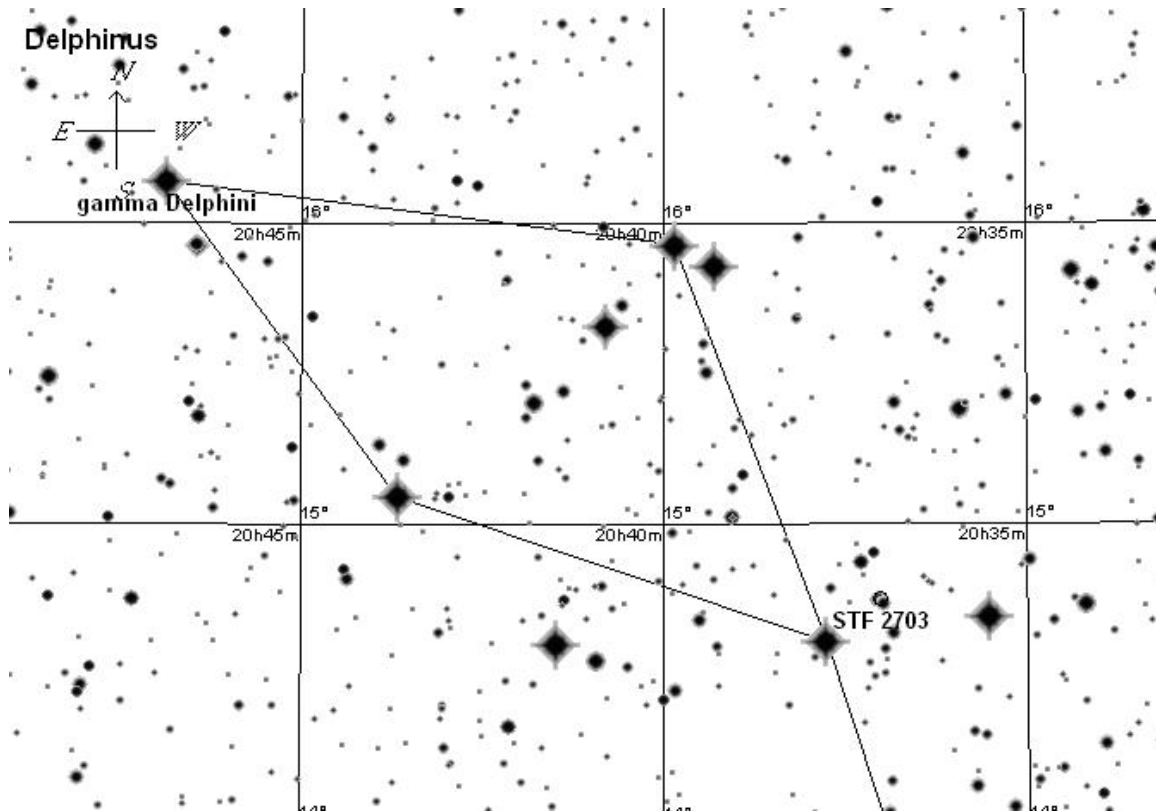
Odd names to say the least.

They first appeared in the Palermo Catalog of 1814, and for many long years were a mystery.

It was English astronomer Thomas Webb who finally solved the puzzle. He noticed that if you wrote them backwards, you came up with Nicolaus Venator - the Latinized form of Niccolò Cacciatore, the assistant and later successor (1817) of the Italian astronomer Guiseppe Piazzi at Palermo Observatory. Niccolò Cacciatore (in english - you guessed it - Nick Hunter) is the only person who has ever successfully named not one, but two stars after himself!

As you gaze at the Dolphin and its delights tonight, take a moment to share a laugh with Nick Hunter. I've oft found it ironic that Cacciatore picked the Dolphin for his joke - after all, Dolphins are supposed to have something of a sense of humor.

A double and a triple in Delphinus

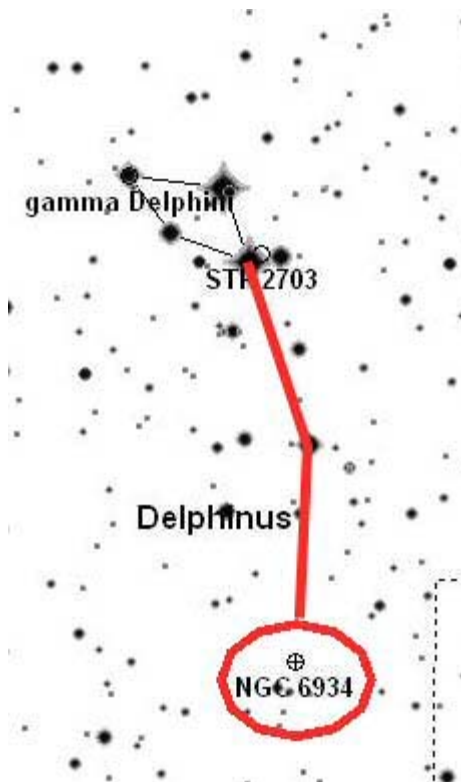
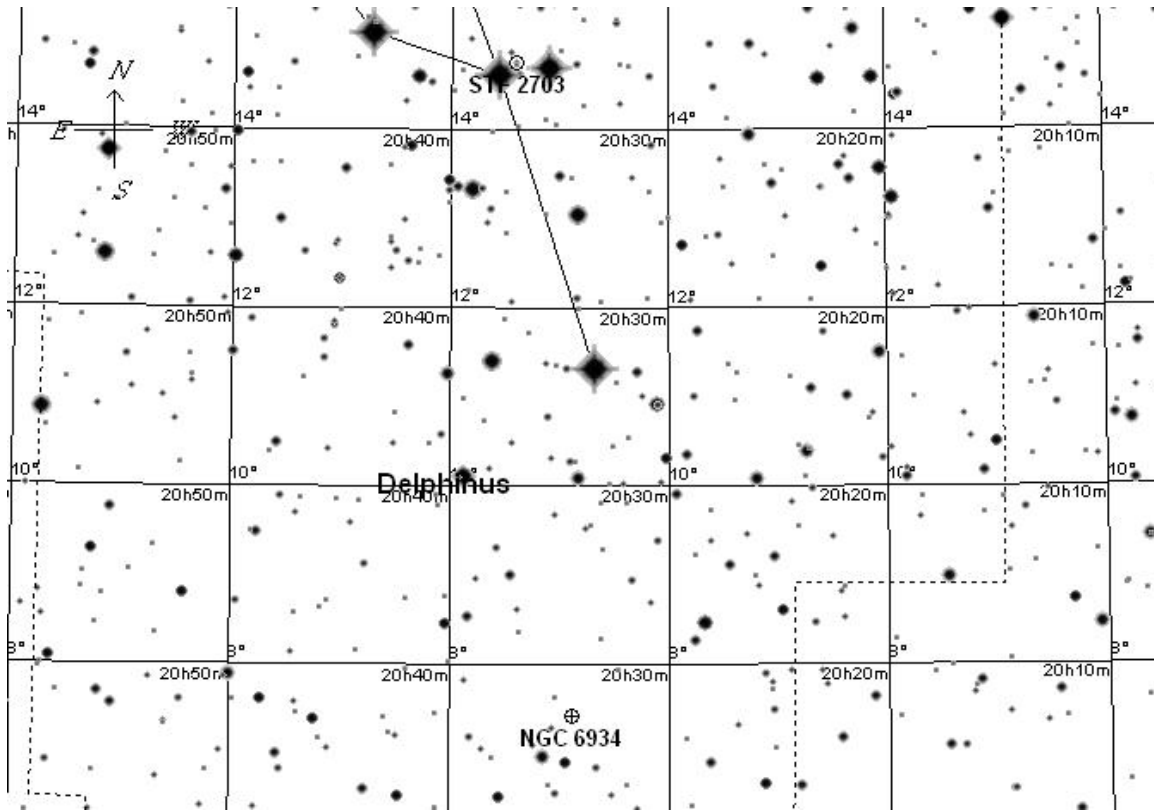


We'll start with a pair of multiple stars that are easily found in the main body of the Dolphin. First head out to Gamma Del in the tip of the dolphins nose. In the TV102, I see two golden hued stars at low power with the one to the northern side slightly dimmer. It's an easy split at 36x, and is even possible at 22x, but increase the power, and you are in for a treat - one of the components becomes an obvious blue green while the other remains gold.

Next head diagonally down to the opposite side of the body of the dolphin. Just to the NW of Beta lies STF2703. An easy catch, it's split easily at 36x, but higher powers frame the barely obtuse triangle a little better. Look for the colors - two reddish stars, and one with a blue white tinge.

Fair warning: For the rest of the objects this month, you're going to have to work a little harder.

NGC 6934 - Globular Clusters Ahoy!



For the remainder of the targets this evening, you are going to have to do some very simple star hoping.

For our first target, we will head down the dolphins tail, and then go about another tail length directly south.

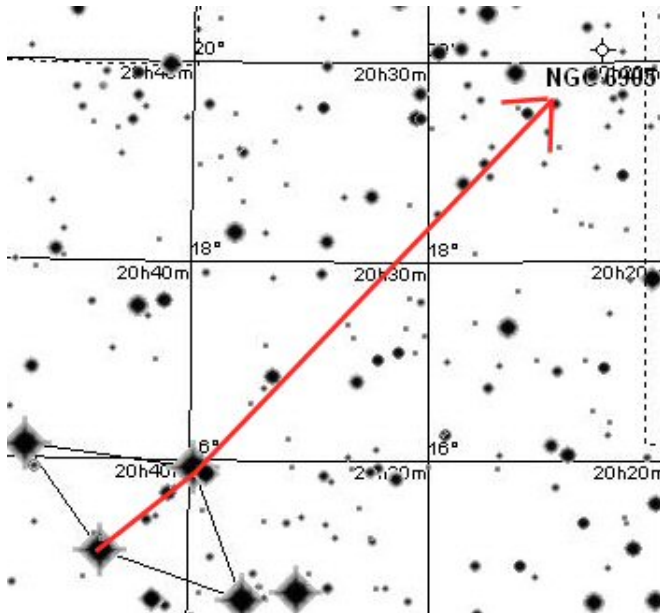
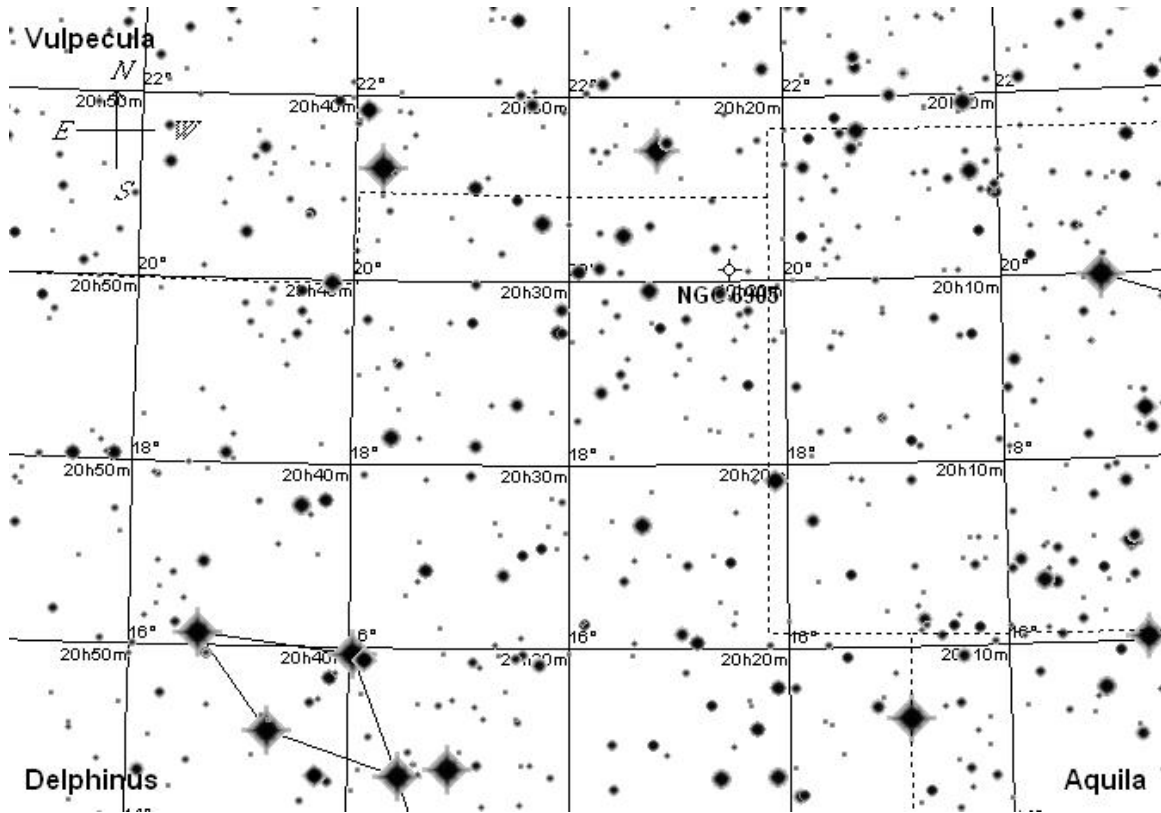
Once you get to this area, start scanning the area at low powers for globular cluster NGC 6934.

This is a cotton ball with no resolution in the 85mm and 102mm scopes, but still fairly bright and large. A 15" at 170x brings a wealth of fine detail and resolves stars across the outer fringes, while 313x begins to



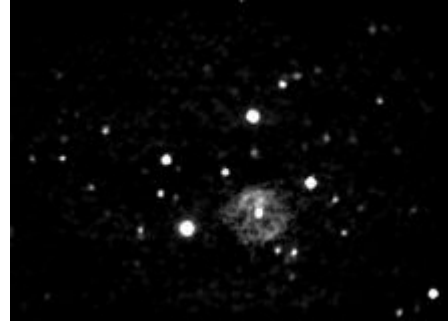
resolves stars towards the center. In fact, the view through the 15" reminds me of how M13 appears in a good 4" scope on a decent evening.

NGC 6905 - The Blue Flash



Lets go for lesson #2 in star hopping - NGC 6905. Now, mentally, connect delta and alpha delphinus as shown in the chart above, and head out about 5 of the "delta/alpha lengths". Once you are in the area, check through a low power or finder view against the pictures shown above and see if you can identify the field. It might take a little fishing around, but don't give up. Remember that depending on the equipment you are using, the view might be reversed right to left, inverted top to bottom both or neither!

Discovered in 1782 by William Herschel, this planetary is surprisingly accessible even to small scopes. On a good dark night, I've caught this in an 85mm scope and it's nothing to write home about, but you can tell there's something there. Usually, from my site fairly dark site, it takes a 4" or larger scope to pull this one out, and it's pretty faint at that. Larger scopes turn it from a faint wisp into spectacular site: In the 15", it clearly shows structure similar to the photos above - a ragged oval embedded in one side of a trapezium. It's a real showpiece with some aperture and dark skies.



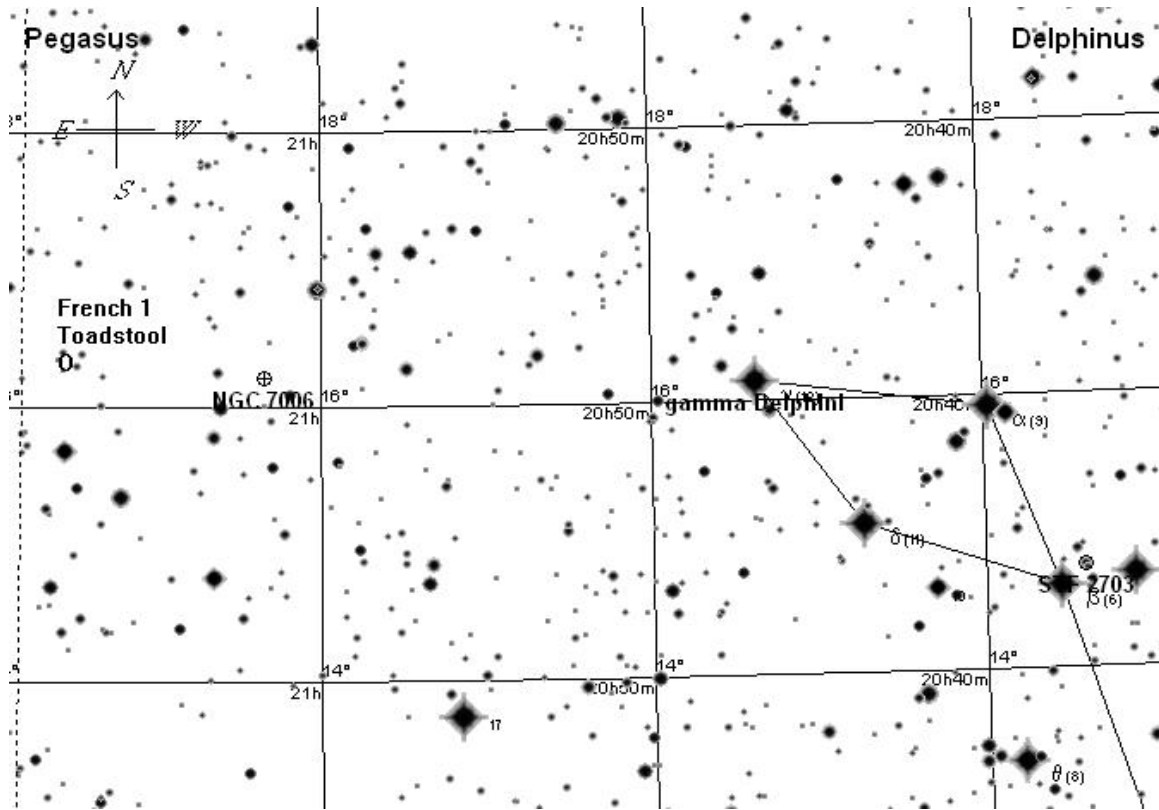
Look for a faint haze in a fairly recognizable grouping of stars as shown in these images - three of the keystone stars are recognizable in a 4" scope. Be sure to use averted vision. Gary Gibbs has viewed it in his 10" SCT and Collins I3 from a light polluted site, and notes "...it was very hard to see. Same goes for visual. I did see it with the I3 using averted vision..." As you can see

by the picture above - Gary had more success with imaging.

If you are viewing 6905 with a larger scope, try upping the power - regardless of what the seeing conditions seem to be. I usually find my best views of planetary nebulas to be around 400-500x in my 15" (or even higher). Planetaries are one of those targets it's ok to "bend" the sane magnification rules.

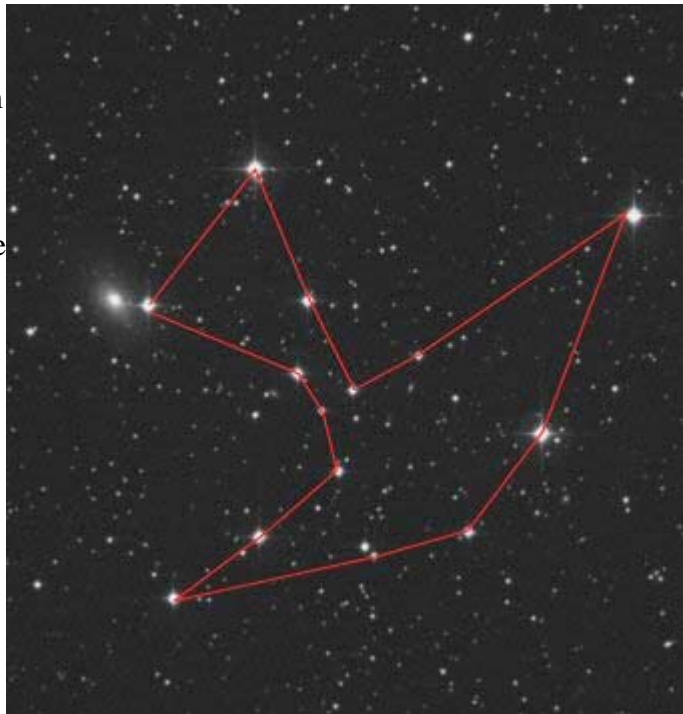
This is also a good time to break out the UHC or OIII filters as planetaries typically respond fairly well to these sophisticated tools.

French 1 (The Toadstool)



For this one, mentally draw a line between gamma and alpha del, and extend that line about 2.5 times from the body of the dolphin and just a little south to hit French 1 - Sue French's ToadStool. This is a very nice probable asterism located on the far eastern side of Delphinus. (B. Alessi independently discovered this grouping, and notes that the proper motions of the brightest stars are somewhat similar, so it may in fact be an actual cluster - Star Clusters: Archinal and Hynes).

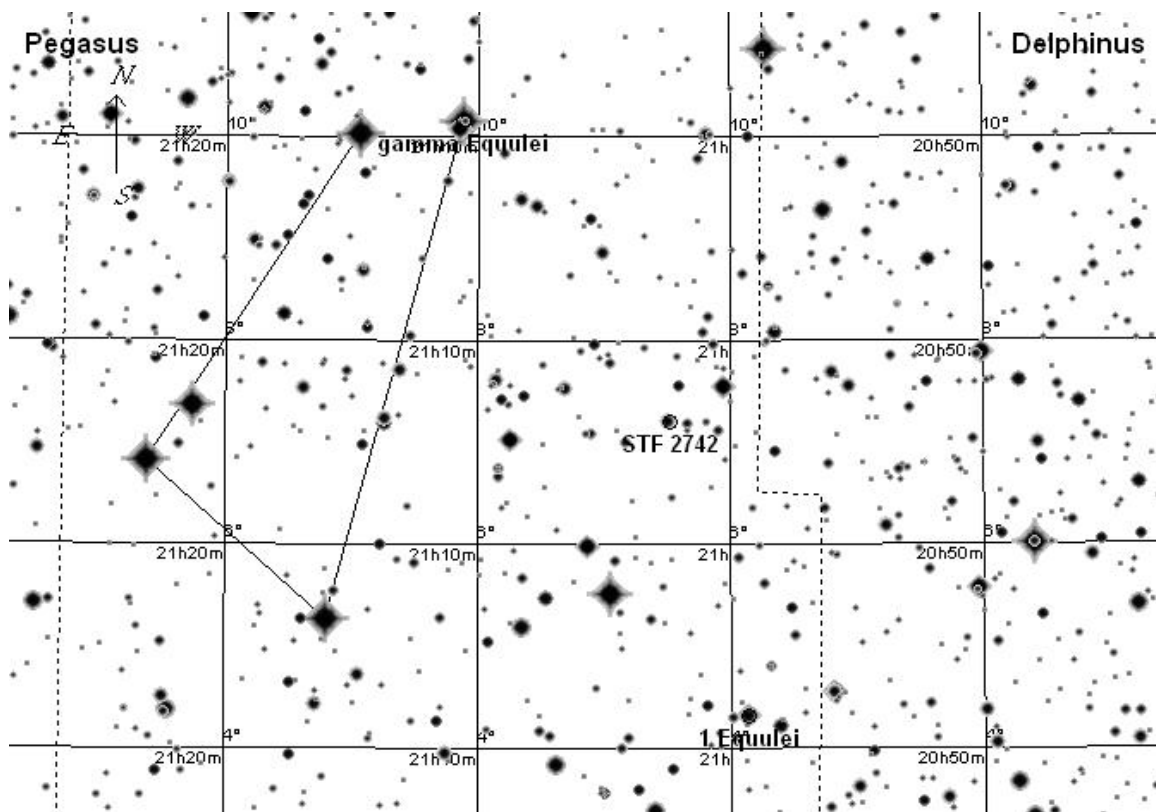
While French notes that it's best viewed at moderate powers, I found it to be nicely framed and easily



picked out at low powers (22x) in a 4" scope. I saw 10 - 11 stars in a fairly obvious toadstool shape with the cap of the shroom pointing to the South, and I found the best views were in a 30mm wide field that yielded 27x and around a three degree true field of view. The galaxy at the base of the celestial mushroom is NGC 7025 - listed at map 12.9, and a size of 1.9' x 1.2' - what's the smallest scope you can spot 7025 in?

I thought this was the one of the better objects in the area, easily visible in a small scope. And while it seems a little dim and small, I have to wonder - Has anyone managed to pick it out in binoculars?

Doubles in the Colt



Since it's brightest and only named star (Kitalpha) shines at a somewhat paltry magnitude 3.97, Equuleus can be a difficult constellation to find, let alone star hop in. You might want to scan this area in a pair of binoculars to see if you can get a good idea of where the four brightest stars are located and familiarize yourself with the area. I've found an optical finder is a great help in getting around areas like this..

But even so, there are at least three worthy doubles for a small scope in this seemingly barren area.

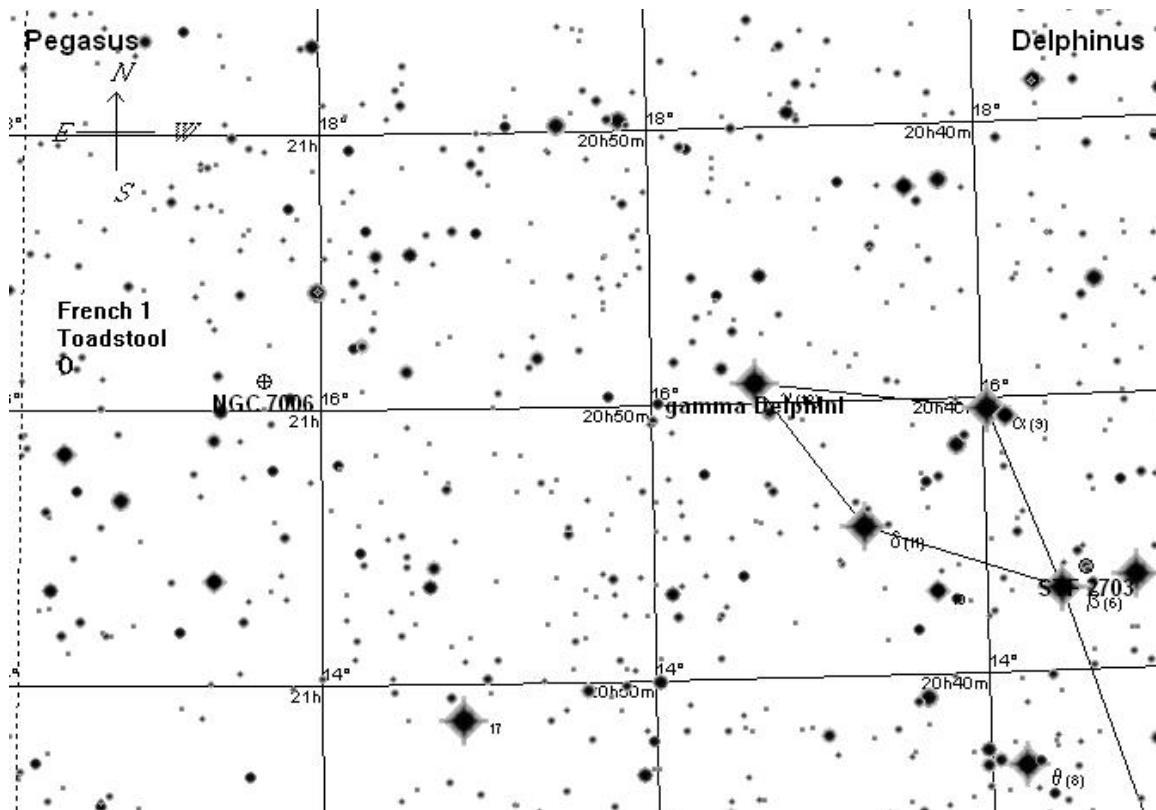
Gamma Equulei: A wide and bright double, use low powers -an incredibly easy split at

22x in a 4" scope - this star probably can be split with binoculars, but I haven't tried it. Give it a shot, and let me know.

STF 2742: First observed by F.G.W Struve in 1831, This is a much closer double than our first stop. At 36x, it's a straight line with no separation visible. At 200x, it looks like eyes staring at me out of the dark of space.

1 Equulei (STF 2737) - Two golden hued stars in my 4" scope, one much brighter than the other I found my best views at 200X.

Challenge Object: NGC 7006



It's almost not fair to give a challenge object this month. If you have made it this far, you've already hit targets harder than in any of my other columns. HOWEVER... this is a rather interesting target and well worth a stop if you can find it. At a distance of 185000 light years, NGC 7006 is one of the farthest globulars known to be associated with our galaxy.

In a 4" scope, this is a difficult target to say the least. On a superb night, I found that at 36x I could hold it with direct vision only about 70 percent of the time. In a 15" scope, my notes say that I picked up a few stars across the face at higher powers.



Additional Reading:

For a twist, I thought I'd recommend a few resources that don't require electricity this month:

Deep Sky Wonders - *Walter Scott Houston*: This is a classic written by one of the most prominent deep sky observers of our time. Scotty was a long time observing columnist for *Sky and Telescope*, and this book is the distillation of his columns

Observing Handbook and Catalog of Deep Sky Objects - *Christian B. Luginbhul and Brian A. Skiff*: A compilation of observations with scopes from 60mm to 12", this is an incredibly helpful tool to have when planning your own starhops.

*I'd love to hear of your experiences under the night sky - please feel free to e-mail me or send any observing reports to: tomt@cloudynights.com
Please indicate if I can cite your observations in future columns.*

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