# Who is NGC 6374?

***by Jenni Kay, F.R.A.S.***

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On a moonless July night this year, I turned my 8-inch SCT towards Scorpius to observe the open star cluster NGC 6374. This should have been an easy target to locate since it's placed some 1.5 degrees east of M6 and the obvious open star cluster NGC 6383 is close by. The correct field for NGC 6374 was indeed easy enough to locate, but at NGC 6374's catalogue position I found only a pair of 12th magnitude stars. To re-check my position, I returned to NGC 6383, some 35 arc minutes to the east, and again carefully re-traced my steps to where NGC 6374 should lie. But again, I landed on this pair of 12th magnitude stars. There was no apparent open cluster to be found. So, what do I do when an object doesn't appear where it's supposed to be? I do what an accountant would call "checking the audit trail"; in this case checking the modern catalogue data against the historical records in an attempt to discover why the object wasn't where it was supposed to be.

In looking at the modern catalogue data, I found that while all the catalogues pretty much agreed on NGC 6374's position at $17^h32.3^m$ –32°36' (J2000.0), not all the catalogues agreed on whether or not NGC 6374 actually existed! The popular "Sky Catalogue 2000.0" recognized this cluster as a true and valid object. The even more popular "Deep Sky Field Guide to Uranometria 2000.0" gave similar details, but added that it is "probably not a cluster". A third reference I checked was the "Catalogue of Open Cluster Data" by Gosta Lynga. It stated that NGC 6374 is "considered doubtful by multiple sources." By now it seemed that NGC 6374 might be a nonexistent cluster, but before jumping to this conclusion, I needed to check the historical records. In other words, to go back to the beginning and trace the historical "audit trail" of this open cluster.

The trail began when Sir John Herschel discovered this cluster in the year 1837. In his catalogue, "Results of Astronomical Observations Made During the Years 1834, 5, 6, 7, 8, at the Cape of Good Hope", he describes this cluster as: "Cluster VIII class; 3' or 4' in extent; a bright ∗ (=B6125)". This last part of his description"...a bright ∗ (=B6125)" indicated the presence of a bright star which he identified as 6125 from the Brisbane Catalogue. What bothered me about this description was his reference to a "bright" star. Neither of the two 12th magnitude stars I found at his position seemed to qualify as "bright", at least not to me! But fortunately, Sir John did give us the source of the star; the Brisbane Star Catalogue of 1826, compiled at Parrammatta, NSW, Australia. At this stage I began to wonder which star was B6125, and I also started to wonder, might it be the same bright star which is found in the nearby cluster NGC 6383?

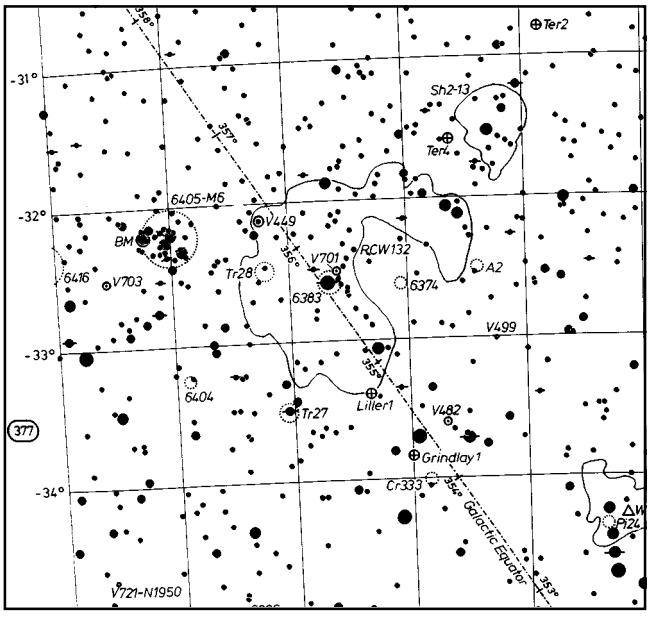
My next resort was to contact someone who might be able to give me more details on B6125, such as it's modern name, magnitude and position. I e-mailed a colleague at the Lowell Observatory in the USA who has direct access to this sort of information. He was able to confirm the modern identity and position of B6125, and indeed, it turned out to be the bright central star in nearby NGC 6383. Here now was the evidence I needed to propose that NGC 6374 was actually a duplicate observation of NGC 6383. I would further point out that Sir John's description for NGC 6383 is very similar to that of NGC 6374: "A B ∗, chief of cl 3' or 4' in extent."

I now felt confident enough to submit a report on my proposal to colleagues in the USA in the "NGC/IC Project" group, a group of amateur and professional astronomers that specialize on sorting out errors in the NGC and IC catalogues. After suitable discussion of the facts, they responded in agreement with my findings, NGC 6374 was an erroneous duplicate observation of NGC 6383 by Sir John Herschel, and NGC 6374 is a nonexistent object.

While we now have one more riddle resolved, there are many other such puzzles on the identifications of NGC and IC objects waiting to be challenged. I enjoy a good mystery, which is why I can't help but to delve into these problems when I chance upon them during my observing runs. For me, this is one of the real challenges of observing, and as they say on the TV show the X-Files, "the truth is out there"!!!

For those with Internet access, the NGC/IC Project group has a WWW page highlighting some of the work being currently undertaken to correct many mis-identifications, and positions for NGC and IC objects. The URL is:

**http://www.ngcic.com/ngcic.htm**




*The region surrounding the mysterious "star cluster" NGC 6374 in Scorpius (Uranometrica 2000.0 Volume II)*