

in future items on Upcoming Events.

MESSIER MARATHONS

In the April 2000 edition of the Journal, I made reference to the March Marathon of searching for 110 Messier Objects to achieve the Messier certificate that is offered by the RASC. The article was not intended to project the hunt as a one-night affair in order to achieve a certificate. It was mainly to introduce to new observers and seasoned observers that if you have not finished your Messier hunt for the 110 objects then March is a good time to do so, as all objects are in the sky over the March period.

I apologize if the article suggested that the feat should only take one night to accomplish, and did not intend to show any disrespect for those who have already achieved the goal of obtaining a search for the Messier Objects, or for those who

are still observing. I know that it can take months or even years, and that each observer takes what time is needed to complete their study of each object to obtain the goal of observing all 110 Messier objects. The universe has been around for millions of years, and one night alone should not be used to take in all of its grandeur.

CONGRATULATIONS TO...

... Mike Boschat, Halifax Centre (www.msccs.dal.ca/~andromed), who co-discovered several comets using images from the *SOHO* satellite (sohowww.nascom.nasa.gov). See *News Notes* for details.

... Doug George, Past President and Ottawa Centre member (www.cyanogen.com), who is credited with the co-discovery of supernova

SN2000K. See *News Notes* for details.

... Bob Hawkes, *Observer's Handbook* contributor on Meteors, who was awarded the Canadian Association of Physics (www.cpa.ca) Medal for Excellence in Teaching. Dr. Hawkes teaches physics and astronomy at Mount Allison University.

... all those who were awarded Messier and NGC Certificates at the March 18 meeting of National Council. The newest Messier Certificate holders are: Dunstan Pasterfield (Regina), Michael Pataky (Windsor), and Gail Lorraine Wise (Winnipeg). The newest NGC Certificate holders are: Dale Jeffrey (Saskatoon), Gordon E. Sarty (Saskatoon), and Garry Dymond (St. John's). Congratulations to everyone on their hard work and accomplishments. ●

At the Eyepiece

Cygnus Delights

Guest column by Guy Mackie, Okanagan Centre (guy.m@home.com)

At a star party last summer I helped a few observers with their first-time Messier list identifications of M29 and M39 in Cygnus the "Swan." I felt a great deal of empathy for them as they made many frustrating attempts to match their telescopic views of the stars in those less-than-spectacular open clusters to pictures and star maps that they had prepared. While I enjoyed locating, observing, and sketching M29 and M39, the objects are described justifiably by Robert Burnham, Jr. in *Burnham's Celestial Handbook* as being "indistinguished" and "sparse," respectively. The *Finest NGC Objects* in Cygnus are a different story altogether. The Cygnus portion of the

Observer's Handbook list contains more "!!"s — indicating showpiece objects — than any other constellation. Huge sweeping clouds of nebulosity, a small but distinct open cluster, and a couple of challenging planetary nebulae make this portion of the *Finest NGC Objects* list one of the finest. All of the objects are easily accessible through my 8-inch f/6 Dobsonian, and, while a nebular filter does enhance the view of some, it is not necessary.

We begin with one of the most beautiful sights in the night sky. At low power the clouds of the Veil Nebula twist and curve through the field of view like fluorescent rivers. The nebula constitutes part of the remains of a supernova explosion some 30 to 40 thousand years

ago. It lies immediately south of the outstretched wing of Cygnus the Swan, between Zeta and Epsilon Cygni. Its brightest section, visible through binoculars, is crescent-shaped NGC 6992. Some areas are bright and well defined, while others fade and dissolve into the background like a sleepy ox-bow. While observing through my 8-inch on July 5th 1999, Daniel Martin, a member of the local RASC centre, described NGC 6992 as similar to a Crescent Moon. My best view of the fainter Veil component NGC 6960, about 2½ degrees west-southwest of NGC 6992, was from the "Clam Shell," a friend's observatory south of Penticton, British Columbia. As viewed through his 16-inch f/4.5 Newtonian at 75× with an [O III] filter, the smoky

tendrils led me on a tangled trek. I followed one laced curve to its scattered end, and in trying to return to my starting point I mistakenly journeyed down another part of the maze, which turned out to be the unnumbered Nile-like section adjacent to NGC 6960. I have played over those five minutes of observing in my mind enough times to make a James Cameron epic.

NGC 7000, commonly called the North America Nebula, can be detected with the unaided eye in a dark sky three degrees east of Deneb. Use binoculars or very low power to bring out the distinctive continental shape of North America, with the Gulf of Mexico and Central America standing out very clearly. The apparently substantial cloud of mixed dust and gas composing the nebula is actually very rarefied, with a density of only a dozen or so hydrogen atoms per cubic centimetre. Spread over a 45 light-year diameter, the cloud is estimated to contain enough hydrogen to make a hundred suns. A narrow-band ultra high contrast (UHC) nebular filter makes a tremendous difference when viewing less well-defined areas of the object. Long dark lanes and bays are engulfed in a pale blue haze, while long wisps and streamers flow throughout, like cosmic contrails.

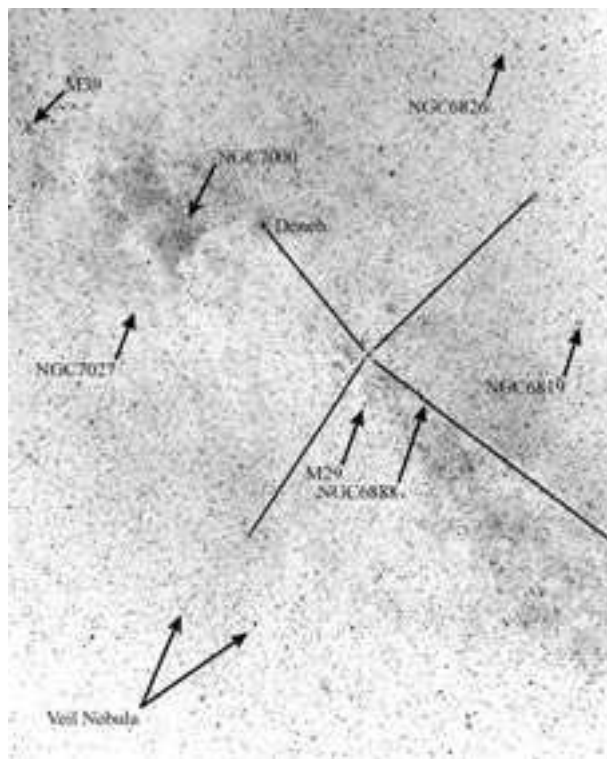
NGC 6888, the Crescent Nebula, is found southwest of Sadr (Gamma Cygni) in the body of the Swan. Through my 8-inch, three bright stars clustered closely together catch the eye at 67 \times , while a fourth star is revealed at 97 \times along with a slight hint of nebulosity. Again, the use of a UHC nebular filter is a great benefit here, as it enhances the distinctive crescent shape. The best view I had was at 163 \times using the filter to highlight the brighter region while sweeping in an arc around the three stars.

Unlike the sparse Messier clusters, the open cluster NGC 6819, located five degrees south of Delta Cygni, is unmistakable. When it floats into the field of view, you know you are looking at a cluster. Appearing at first to be smaller than its already diminutive 9'.5 diameter, this very rich cluster is actually made up of over 150 stars. Through my reflector,

the eye-grabbing compact central region shows a distinct U-shape consisting of a dozen or so brighter stars set within a fuzzy cloud of faint stars. Higher power (163 \times) will resolve the fainter stars to provide a very rewarding view.

If you are looking for a challenging planetary nebula (PN), the Cygnus *Finest NGC Objects* list offers two good candidates. Some PNs are rather difficult to find for planetary nebula-challenged types such as myself, but star hops to the two in Cygnus are fairly straightforward, so finding them does not take long. The Blinking Planetary, NGC 6826, is located due north of Delta Cygni at an almost mirror position of NGC 6819. The planetary acquired its name from the curious antics of its 10.6-magnitude O-type central star. With direct vision the star is bright and visible, but when using averted vision the bright nebula causes the star to blink out! Searching through broken cloud and first quarter moonlight, I located it using 97 \times , noticing a small, round and slightly creamy nebulosity with even surface brightness. At 163 \times the central star was resolved. The object is fun to share with others. Both serious observers and flat earth types alike will enjoy the novelty of this interactive planetary.

Usually when I am looking for planetaries, I hear the Yoda-like voice of Okanagan Centre president Ron Scherer whispering in my head, "use the colour Guy, use the colour." Sadly however, it is only after I find the object that I notice the colour. For those more in tune with the "force," NGC 7027 has a blue tint that stood out for Scherer, who found it July 7, 1999 with his 10-inch f/6 Dobsonian at only 60 \times . At that low power he described a "distinctive blue colour" and "even surface brightness," while at 121 \times he



The locations for all objects discussed are identified in this negative image photograph of Cygnus. A ten minute exposure was used with hypered Kodak Technical Pan film and a 50-mm f/2.8 lens (photo by Dave Lane).

reported that "averted vision improved visibility, revealing a fading towards the edges" and even "hinted at the central star." I reached the planetary positioning pinnacle when locating NGC 7027. Travelling southeast from Deneb, I put the Telrad slightly offset from the midpoint of Xi and Nu Cygni, looked through the eyepiece, and there it was dead centre! At 97 \times it was stellar in my scope, but even I could not miss that hint of blue. At 163 \times it was round in shape.

The *Finest NGC Objects* list offers a varied and rewarding selection of targets in the constellation of Cygnus. Your search for all listed objects is certain to reveal many other astronomical delights in this rich area of the Milky Way encompassed by the Swan's eternal flight. ●

Guy Mackie enjoys observing from the clear and dark hillsides near Kelowna, British Columbia. He recently completed the RASC Messier list, and over half of the Finest NGC Objects with his 8-inch Dobsonian. He enjoys skiing, hiking, and camping with his family.