

Dark Sky Celestial Scavenger Hunt Bear Creek AR September 14-16, 2023

In a light-polluted world, a Dark-Sky Festival is a great opportunity to have fun learning your way around the sky. Completing this scavenger hunt for the naked eye, binoculars, or small telescope will get you started. Work on the brighter items beforehand, or wait until the festival to do it all. If you need some help, attend one of the Festival's guided constellation tours.

Study the attached maps and start learning the star patterns before you go out to observe. The brightest stars we see are 1st magnitude, visible even when the moon is up and in city lights. With a clear dark sky sight, you can see down to 6th magnitude.

Whether you start at home or wait till under the dark sky of the Festival, start early enough to watch the stars come out – about an hour after sunset. First, you'll see the three bright stars of the Summer Triangle, **Vega, Deneb, and Altair**. By the time of the Festival, they will be high overhead, and to the west, **Saturn will be just south and east of the zenith with Jupiter** in the East.

Then as the stars come out, trace out the constellations of **Lyra, Cygnus, and Aquila**. As it gets fully dark, see the **Milky Way** traveling behind the Summer Triangle, leading down to the Southwest horizon between **Sagittarius** (looks like a teapot) and Scorpius (looks like a Scorpion).

Circumpolar – Because we are about thirty-five degrees north of the equator, that much of the northern sky never sets, it just goes around and around; it is thus referred to as the circumpolar region of our sky. During the festival, the big dipper will be low in the NW at dusk. If your horizon is low enough to see it, use it to find the North Star (Polaris), which being near the earth's polar axis, should be 35 degrees above the horizon.

Cassiopeia, also **part of the circumpolar region and** shaped like a W, is NE of Polaris. Note its position with the North Star and how it changes during the evening. With dark skies, trace out Cepheus, the Little Dipper, and Draco the Dragon.

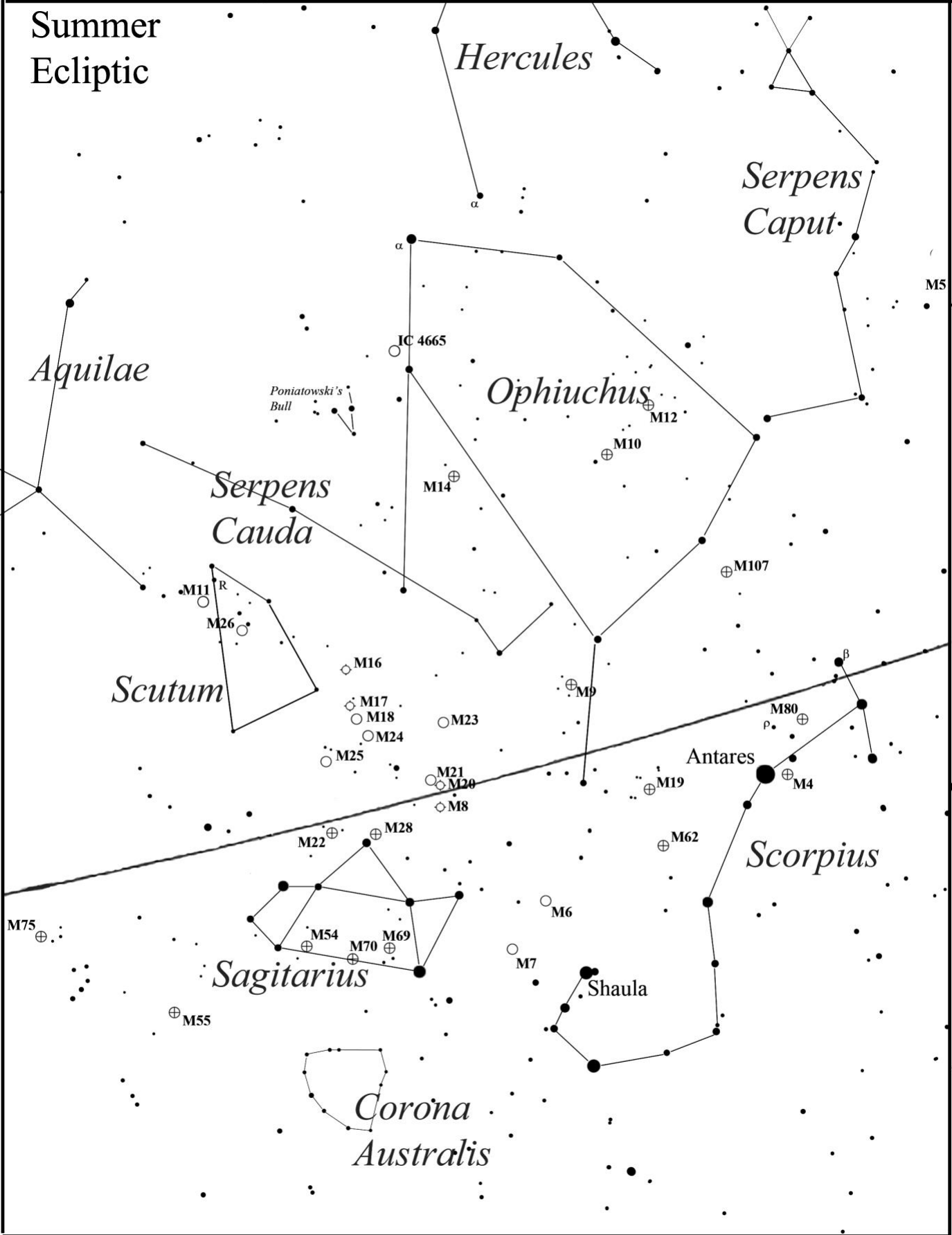
The Summer Ecliptic includes **Scorpius, Sagittarius, and Ophiuchus**. You'll find many deep sky objects in these constellations.

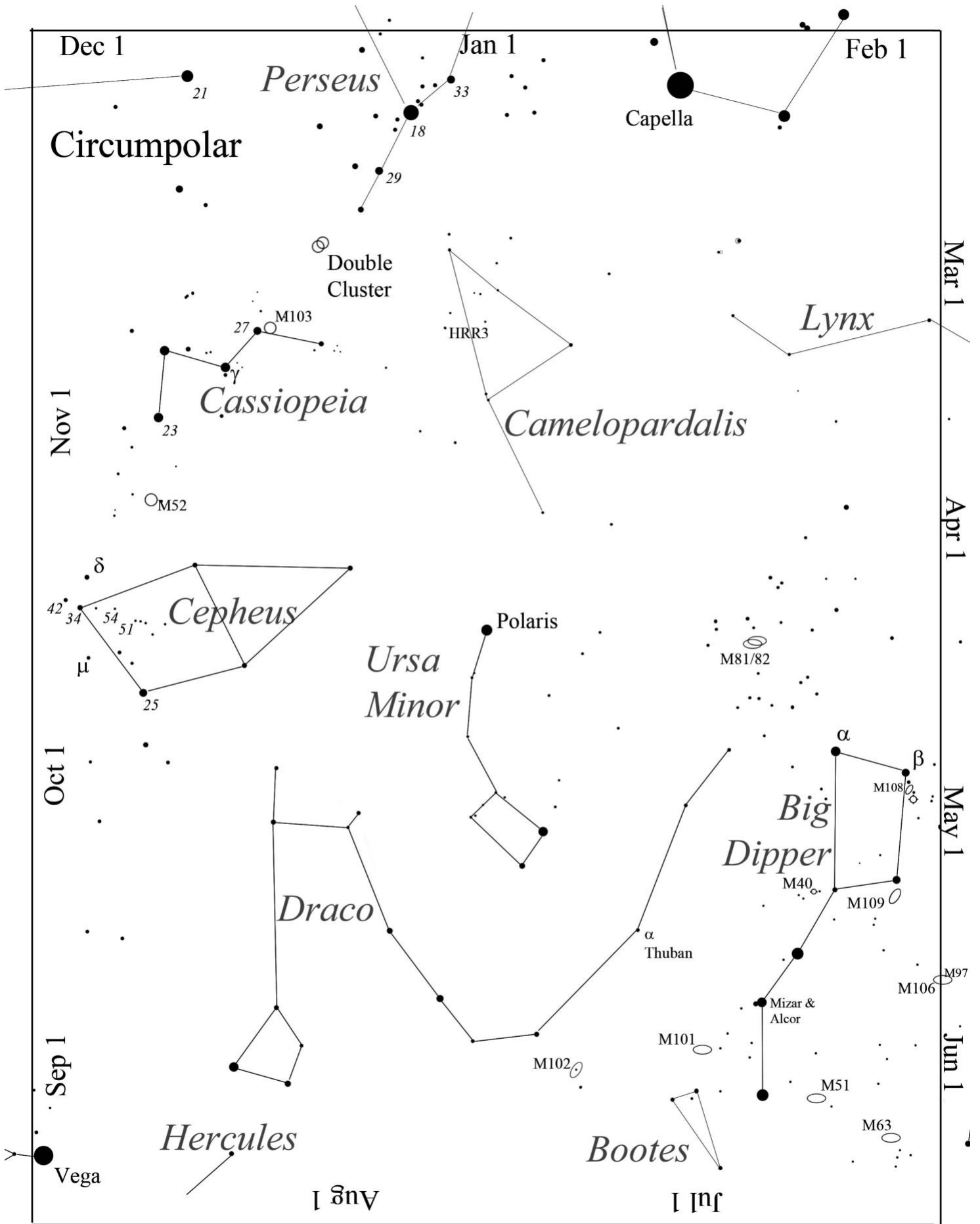
Fall Square Find the Fall Square or "Square of **Pegasus**," the flying horse, in the east when it gets dark. It is a nice square made up of 2nd magnitude stars. Stretching out from one corner toward the north star will be **Andromeda**, the princess, toward **Perseus**, the hero of our tale. Wait till 10:00 or so to let it get above the horizon more before finding these objects

	Dark Sky Festival Scavenger Hunt Check Mark & Date you see it N or blank Naked Eye B Binocular T Telescope	Complete 20 for Certificate All for Gold
1	Big Dipper	
2	Arcturus Make an Arc to Arcturus	
3	Polaris & Little Dipper	
4	Scorpius and Antares	
5	Sagittarius	
6	M6 & M7 B Open Clusters in Scorpius	
7	M8 & M20 B T Trifid & Lagoon Nebulae	

8	M22 B T Globular Cluster in Sagittarius	
9	M16 B T Eagle Nebula in Sagittarius	
10	M25 N B Sagittarius Star Cloud (Center of	
11	M13 B T Great Hercules Globular Cluster	
12	Ophiuchus	
13	Hercules	
14	Summer Triangle	
15	Vega & Lyra	
16	Deneb & Cygnus (Northern Cross)	
17	Altair & Aquila	
18	M11 B T Wild Duck Cluster in Scutum	
19	Albireo – N T Double Star in Cygnus	
20	M57 – T The Ring Nebula in Lyrae	
21	Milky Way N	
22	Hercules	
23	Delphinus	
24	Coat Hanger B Open Cluster in Vulpecula	
25	Sagitta	
26	Cassiopeia	
27	Cepheus	
28	Pegasus – Square of Pegasus – Fall Square	
29	M31 Andromeda Galaxy N B T	
30	Saturn N T	

<https://darkskyarkansas.org/store/> to join and buy the Star Guide





Fall Square

