## The Chatfield Binocular Challenge List

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This list has been prepared from various sources of information. I have tried to include enough variety so as not to rely solely on just the Messier List. All of the objects should be visible with a pair of 7X35-50 binoculars, although a larger pair will show more detail. I hope this will encourage you to get out under the stars and enjoy the heavens with minimal equipment. A certificate will be available to those who complete the list. A few rules are:

- 1. You must find the objects on your own.
- 2. You cannot use a telescope, or any such instrument to locate the objects.

The use of a good star atlas, such as *Sky Atlas 2000* or *Uranometria*, is recommended. A good dark site will help you in finding the objects as well assist you in seeing more details. You will only have to find 35 out of the 40 objects in the list. This will give you a choice of objects, if you find it hard to locate some of them. I encourage you to make notes on your observations, which can be in any format you choose. This will help in developing your observational skills. Thank you. —*Darrell Chatfield* 

CONSTELLATION	R.A. DEC.	OBJECT	TYPE	MAG	DESCRIPTION
ANDROMEDA	00 40.0 +41 00	M31	GAL	3.5	Famous Andromeda Galaxy
ANDROMEDA	01 57.8 +37 41	NGC 752	O/C	5.7	75 stars. Large. Irregular.
AQUARIUS	21 33.5 -00 49	M2	GL/C	6.5	Rich globular. Fine object.
AURIGA	05 28.7 +35 50	M38	O/C	6.4	Large. Easy to resolve.
AURIGA	06 49.3 +41 04	NGC 2281	O/C	5.4	Group of 30 stars. Bright.
CAMELOPARDALIS	03 58.0 +63 06	Kemble 1	ASTER.	4.0	Kemble's Cascade. Chain of stars.
CANCER	08 40.0 +19 59	M44	O/C	3.1	Beehive Cluster. Excellent.
CANES VENATICI	13 42.2 +28 23	M3	GL/C	6.0	Small object. Bright.
CANIS MAJOR	06 47.0 -20 44	M41	O/C	4.5	Large glowing patch of light.
CASSIOPEIA	23 57.0 +56 44	NGC 7789	O/C	6.7	300 stars. Large white patch.
CASSIOPEIA	01 46.0 +61 15	NGC 663	O/C	7.1	80 stars. Rich.
COMA BERENICES	12 25.0 +26 00	Melotte 111	O/C	1.8	Coma Cluster. Huge.
CYGNUS	20 58.8 +44 20	NGC 7000	E/N	5.9	North American Neb. Obvious
					glow.
CYGNUS	21 32.3 +48 26	M39	O/C	4.6	Loose. Bright cluster.
GEMINI	06 08.9 +24 20	M35	O/C	5.3	200 stars. Very rich.
HERCULES	16 41.7 +36 28	M13	GL/C	6.0	Famous globular. Fuzzy glow.
HYDRA	08 13.8 -05 48	M48	O/C	5.9	80 stars. Large. Triangular shape
					in the center.
MONOCEROS	07 03.2 -08 20	M50	O/C	6.0	80 stars. Bright smudge.
MONOCEROS	06 41.1 +09 53	NGC 2264	O/C	3.9	Christmas Tree Cluster.
ORION	05 35.4 -05 27	M42	E/N	4.0	Great Orion Nebula.
OPHIUCHUS	16 57.2 -04 06	M10	GL/C	6.6	Glowing ball of light.
OPHIUCHUS	16 47.2 -01 57	M12	GL/C	6.9	Large globular.
PEGASUS	21 30.0 +12 10	M15	GL/C	6.4	Nice object.
PERSEUS	02 19.0 +57 09	NGC 869/884	O/C's	4.4	Double Cluster. Beautiful field.
					Very easy.
PERSEUS	02 42.0 +42 47	M34	O/C	5.5	60 stars. Easy.
PISCES	23 30.0 +03 00	Circlet	ASTER.	3.0	Circlet of 5 main stars.
PUPPIS	07 36.6 -14 29	M47	O/C	4.5	30stars. Hazy patch.
SAGITTARIUS	18 36.4 -23 54	M22	GL/C	6.0	Excellent globular.
SAGITTARIUS	18 18.4 -18 25	M24	O/C	11.1	Star Cloud. Excellent view.
SCORPIUS	16 23.6 -26 31	M4	GL/C	6.5	Large fuzzy ball of light.
SCORPIUS	17 40.0 -32 12	M6	O/C	4.6	130 stars. Bright.
SCUTUM	18 51.1 -06 16	M11	O/C	5.8	Wild Duck Cluster. Very rich.
SERPENS	15 18.6 +02 05	M5	GL/C	6.2	Very rich cluster.
SERPENS	18 39.0 +05 27	IC 4756	O/C	5.0	Very large.
TAURUS	03 47.5 +24 07	M45	O/C	1.2	Pleiades. Very bright. Fine object.
TAURUS	04 27 +16 00	Melotte 25	O/C	0.5	Hyades. V-shaped. Look for Aldebaran.
URSA MAJOR	09 55.6 +69 04	M81/M82	GAL	7.0/8.4	Easy pair.
URSA MAJOR	13 23.9 +54 56	Mizar/Alcor	D/S	2.3/4.0	Easy-to-see pair.
VULPECULA	19 59.6 +22 43	M27	PL/NEB	7.5	Dumbell Neb. Misty glow.
VULPECULA	19 25.4 +20 11	Collinder 399	ASTER.	3.6	Coathanger Cluster. Look for upside-down coathanger.