Star Charts

excerpted from www.carolrpt.com/astroguide.htm

Assembled by Carol Beigel

The list of 93 objects and the 15 charts to help you find them were created using the Deep Space Astro Card software. Only objects you can find with a small telescope or binoculars are included. The darker the sky, the more objects you will be able to see. Of course, the bigger the telescope the more detail you can see!

The spreadsheet has a column that lists each object's magnitude - the lower the number the brighter the object. Under light-polluted skies, or nights when the moonlight is bright, you may only be able to see Mag 4 or less. The RA column tells you when an object rises in the East - the lower the number the earlier it rises. The Declination tells you to look North or South when looking East. Positive numbers are north and negative numbers are south of the celestial equator.

Good Binocular Objects - These objects are included in my list of 93.

Nebulas

Orion Nebula, M42
Nebulas in Sagittarius, The Lagoon (M8), the Trifid (M20), the Swan (M17), Eagle (M16)
The North American Nebula, NGC 7000 in Cygnus
The Dumbell Nebula (M27) in Vulpecula
The Helix Nebula, NGC 7293 near Aquarius

Open Star Clusters

The Peiades, M45
The Hyades in Taurus
The Alpha Persei Group in Perseus
The Double Cluster in Perseus
The Coma Cluster in Coma Berenices
The Beehive (Praesepe, M44) in Cancer
M6 and M7 above the tail of Scorpius

Globular Clusters (look like fuzzy balls in binoculars as do comets)

M13 and M92 in Hercules
M22 in Sagittarius
Omega Centauri in Centaurus - only visible here in March and April

Galaxies

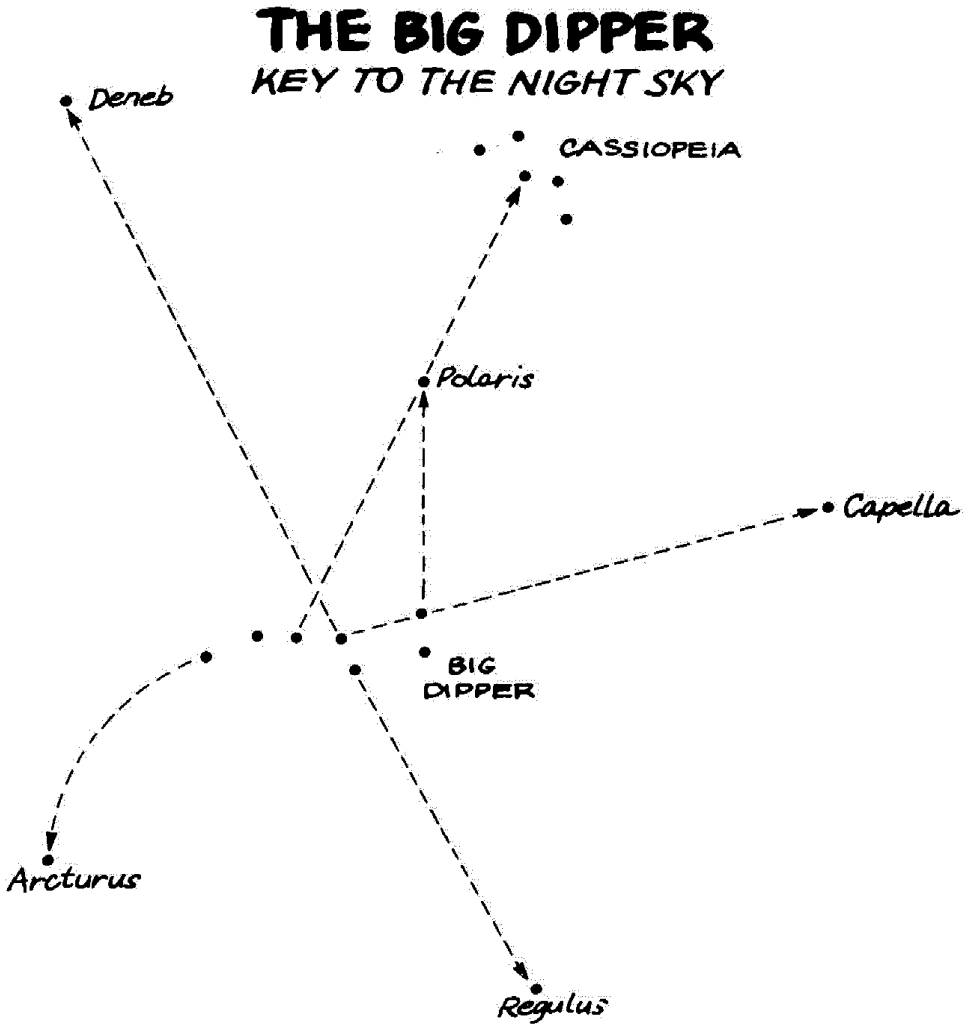
The Andromeda Galaxy, M31 - look between Cassiopeia and Pegasus
The Triangulum Galaxy, M33

Star Chains

Kemble's Cascade in Camelopardus (between the North Star and the Double Cluster in Perseus) NGC1502 is at one end of it.

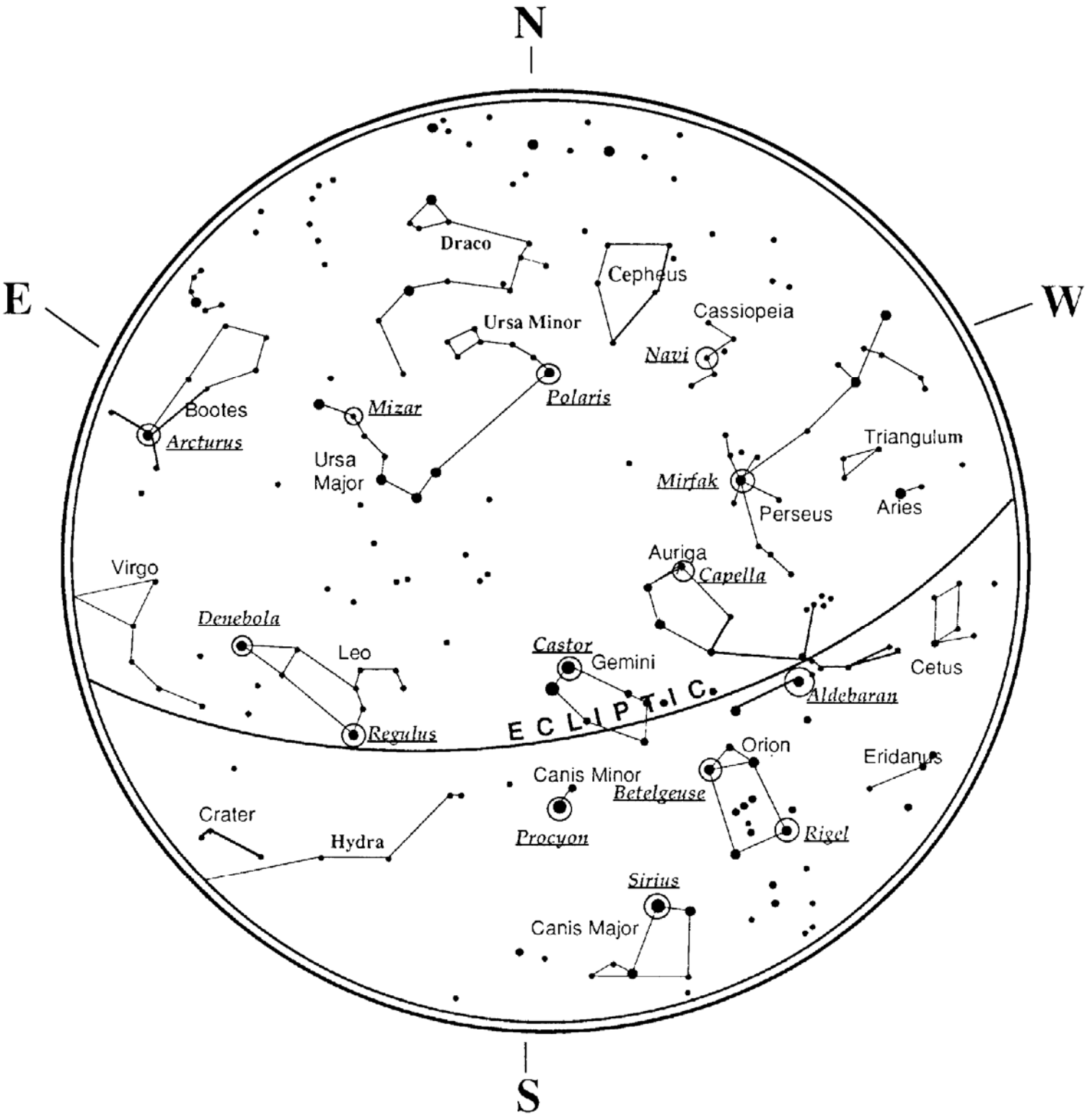
Messier Charts - Charles Messier (1730-1817) made a list of 103 "faint fuzzies" that are not comets. He used a small telescope in the middle of Paris. To see thumbnail photos of these objects, refer to the back of the full version of A Simple Guide to Backyard Astronomy Using Binoculars or a Small Telescope at www.carolrpt.com/astroguide.htm.

This page from the Edmund Sky Guide (1977), can help you get oriented to the sky from just about anywhere in the Northern Hemisphere. The seasonal constellation charts that follow were found in the Celestron manual that came with my telescope at www.celestron.com..

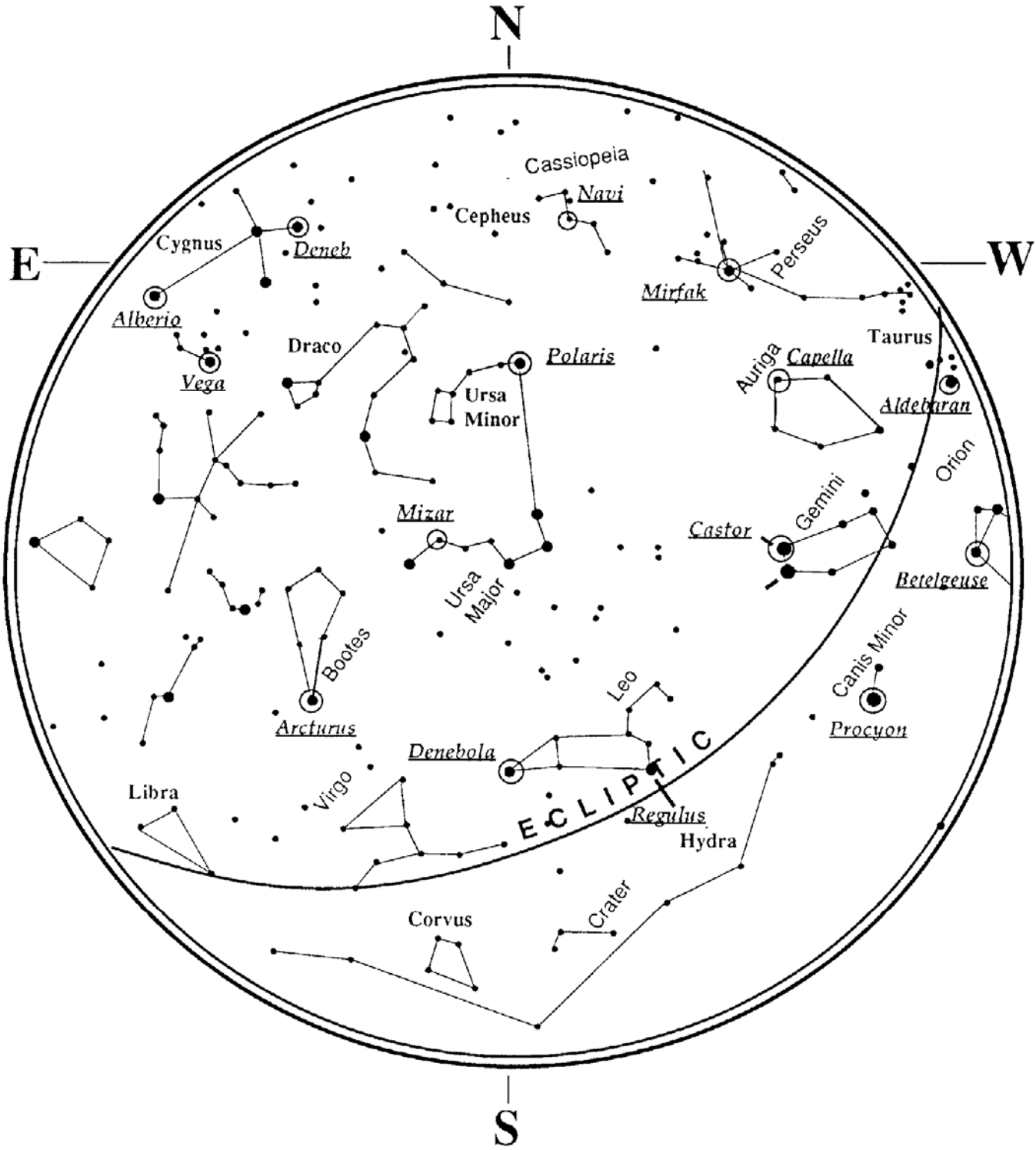


By some cosmic coincidence the Big Dipper stars are arranged so that they conveniently point at most of the major bright stars in the sky. This diagram can be used at any time of any night of the year because the stars do not change their positions relative to one another. What does change is the direction that you face into space due to Earth's rotation and revolution. This means that although the Dipper itself will always be visible (if you live north of 38° north latitude) not all of the stars that are indicated in this diagram will be above the horizon at any one time. Once you have identified some of the major guide stars you can then turn to the appropriate connecting map on the following pages to continue your sky exploring.

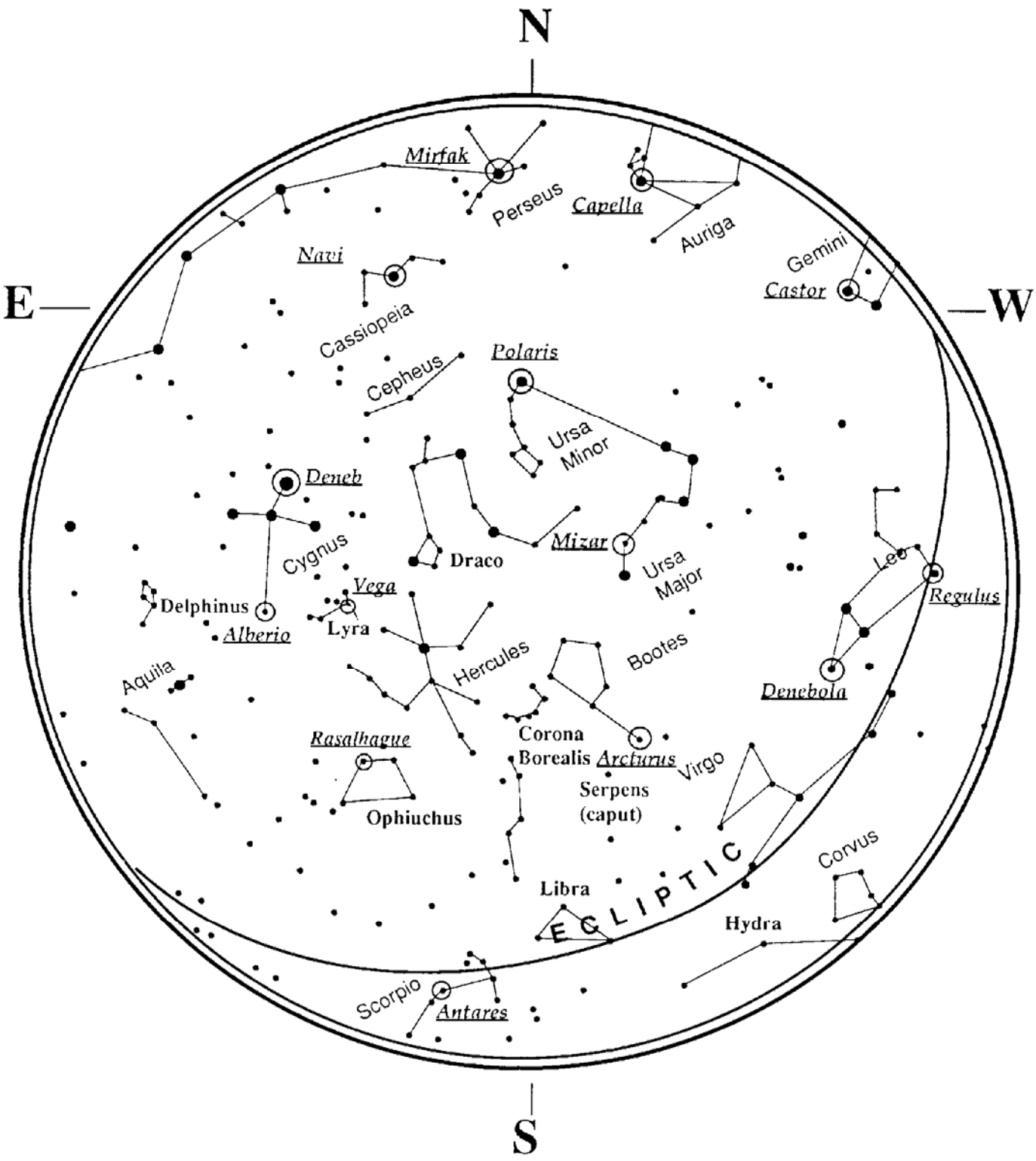
January - February Sky



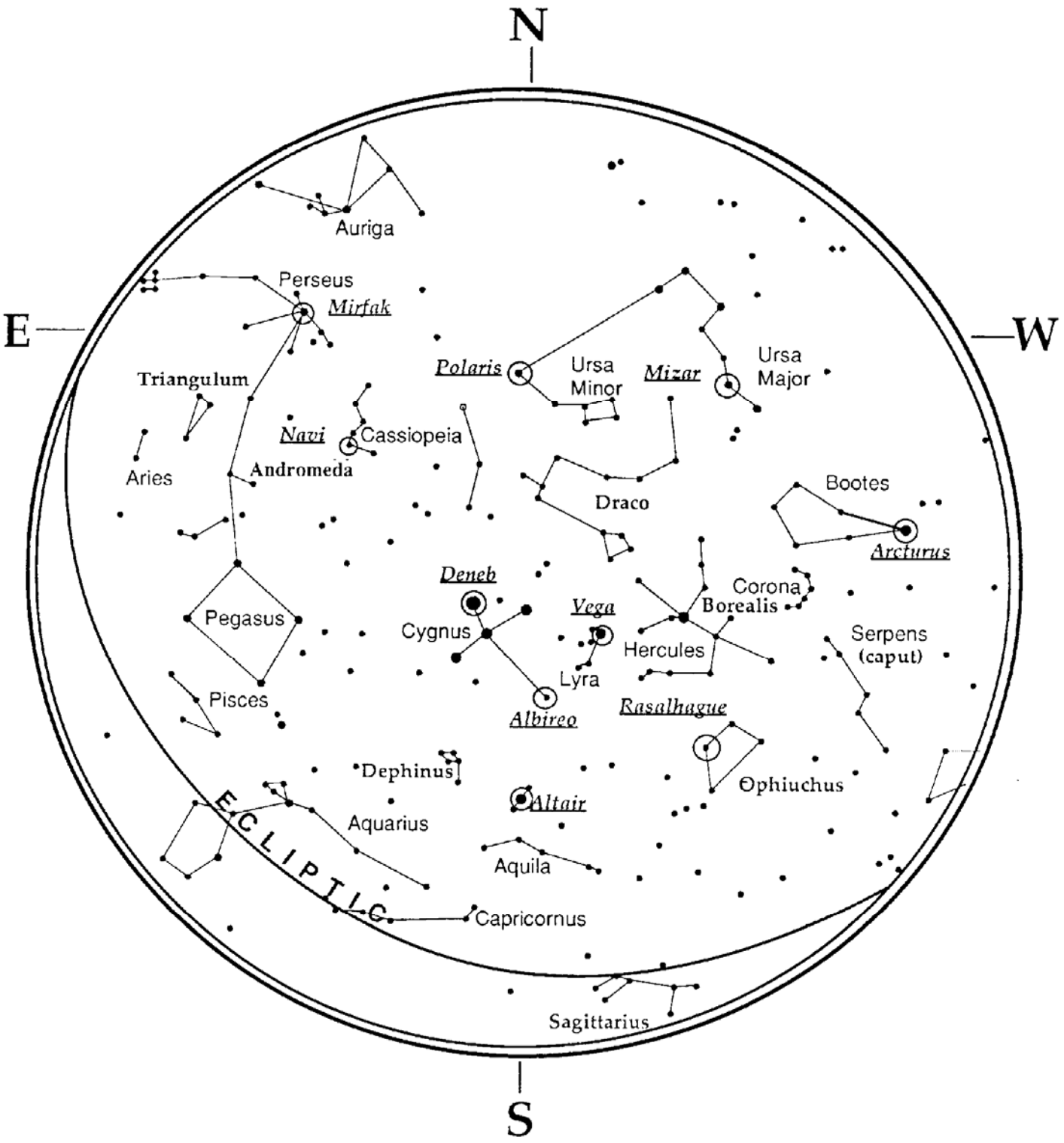
March - April Sky



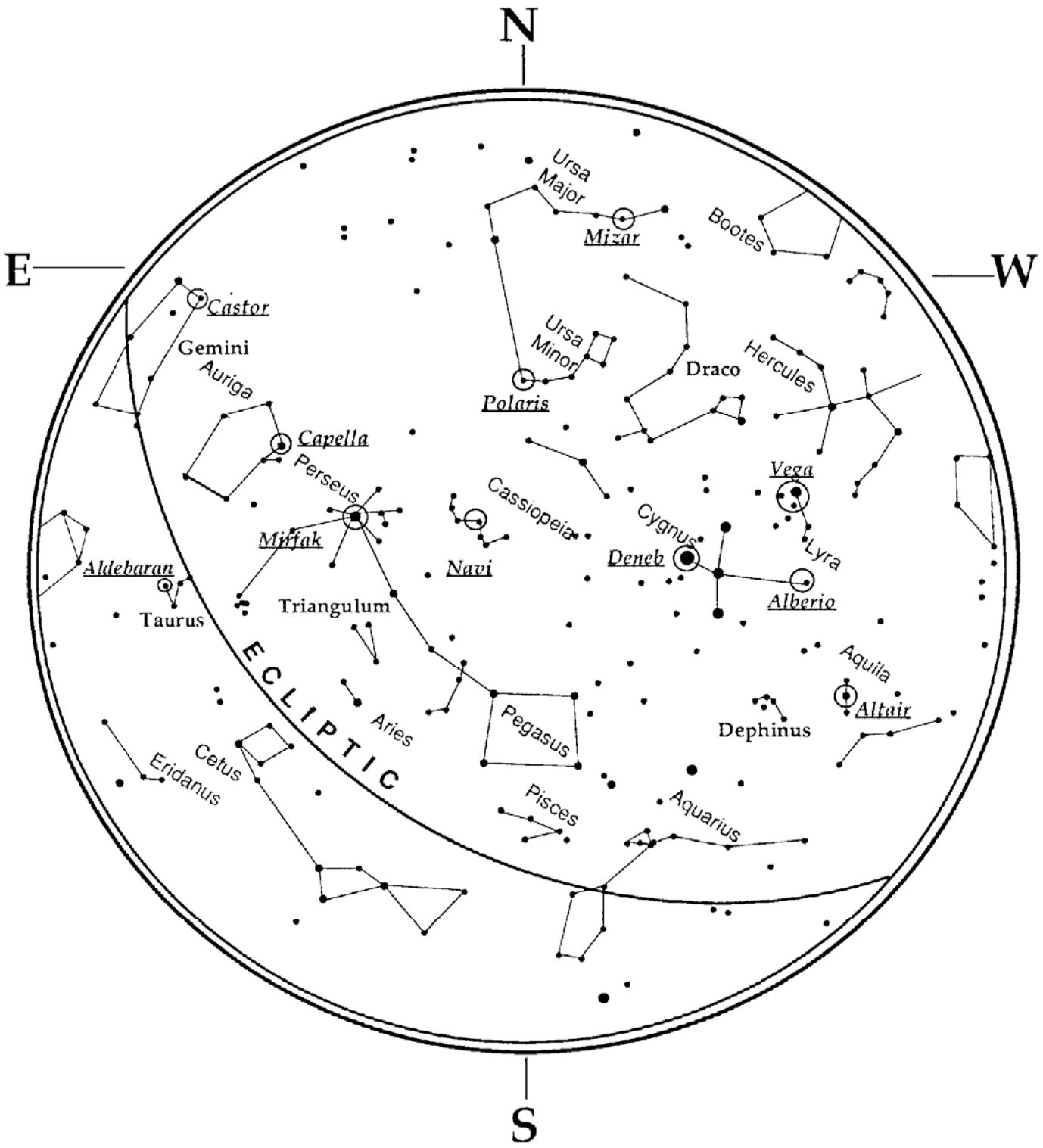
May - June Sky


N
E
W
S
Mirfak
Perseus
Capella
Auriga
Navi
Cassiopeia
Gemini
Castor
Cepheus
Polaris
Ursa Minor
Deneb
Cygnus
Draco
Mizar
Ursa Major
Leo
Regulus
Vega
Delphinus
Alberio
Lyra
Hercules
Bootes
Aquila
Denebola
Rasalhague
Corona Borealis
Arcturus
Virgo
Ophiuchus
Serpens (caput)
Corvus
ECLIPTIC
Libra
Hydra
Scorpio
Antares

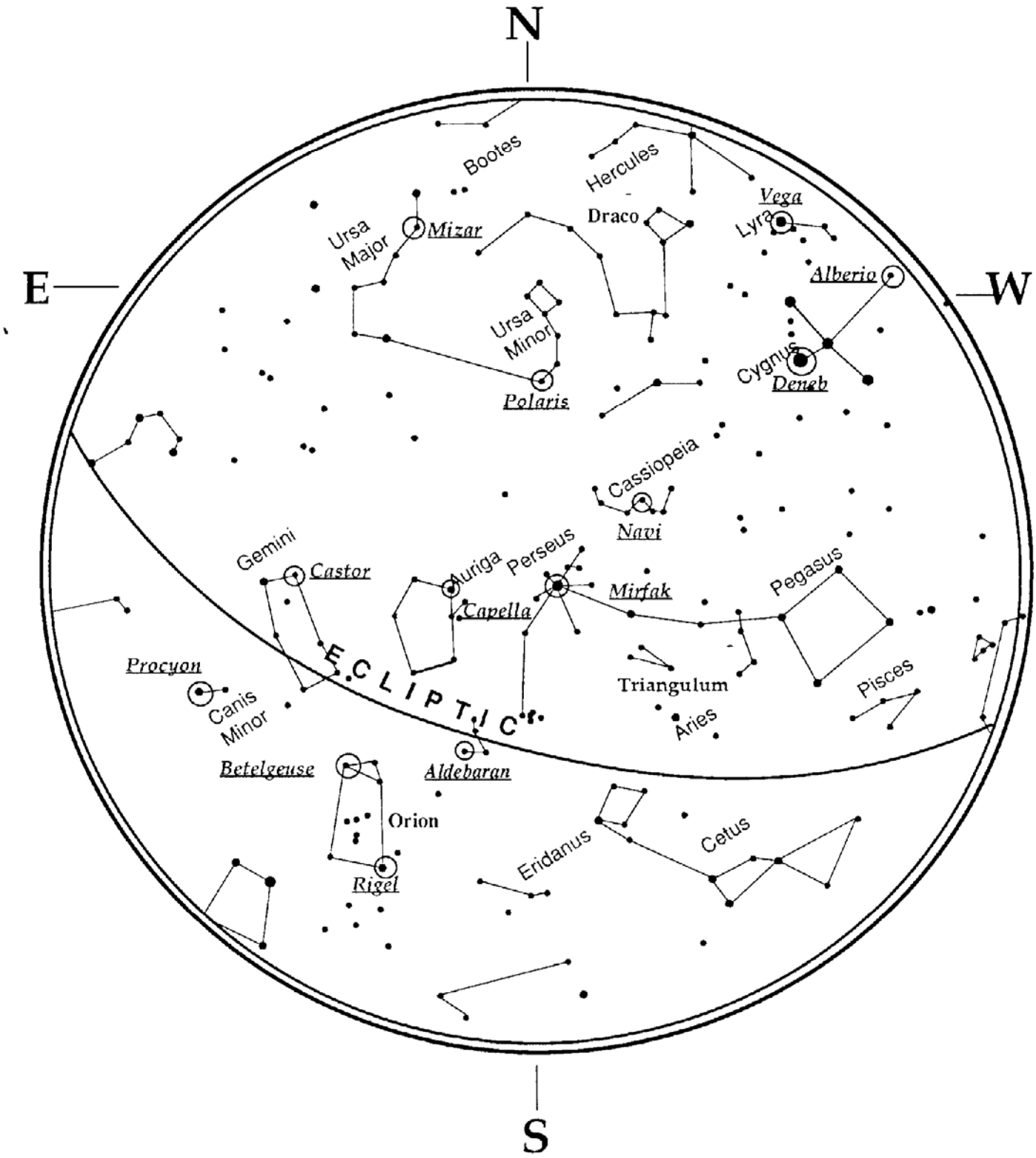
July - August Sky



September - October Sky



November - December Sky



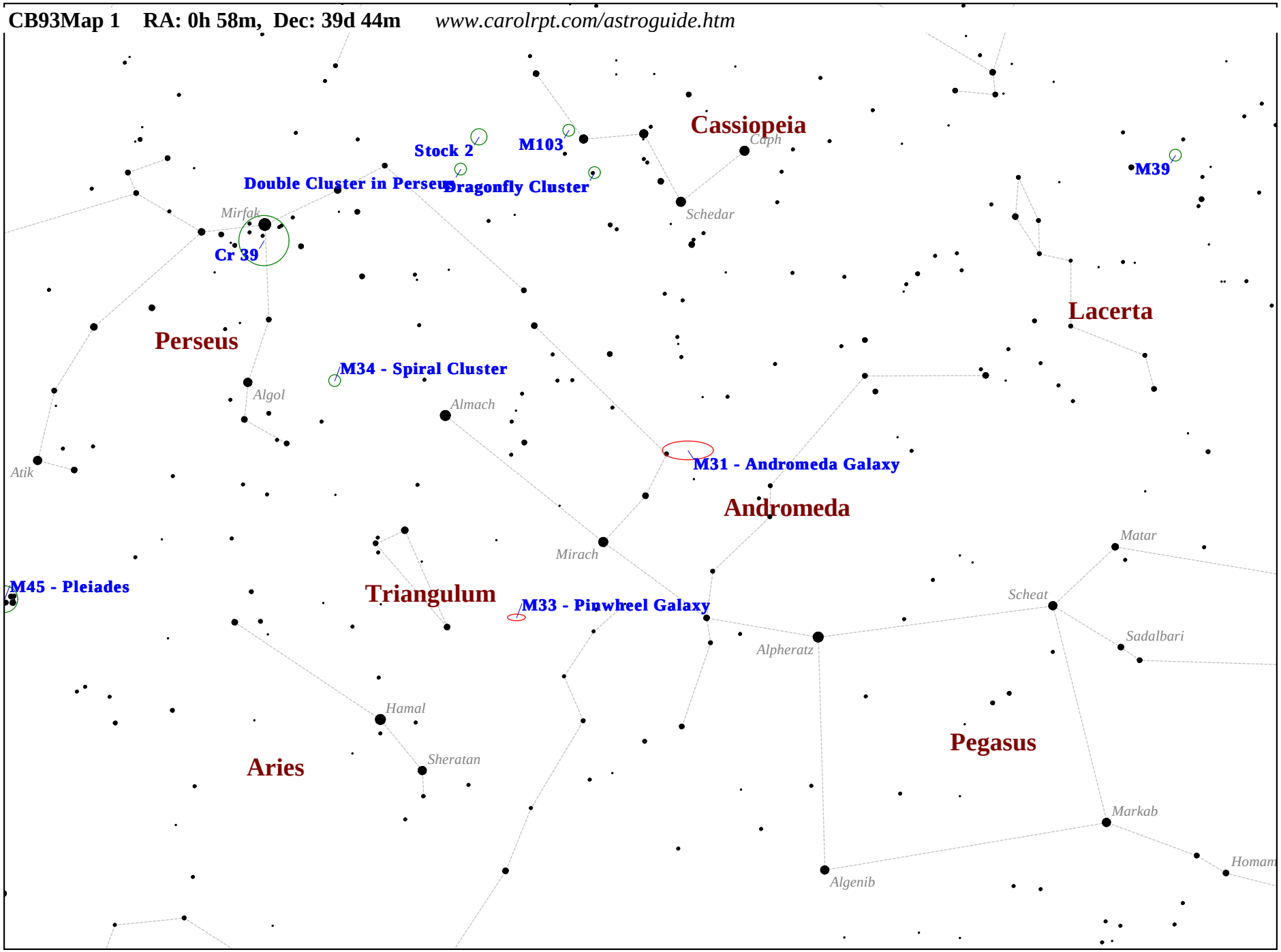
CB93 Best Objects in the Sky for Small Telescopes and Binoculars sorted by Constellation

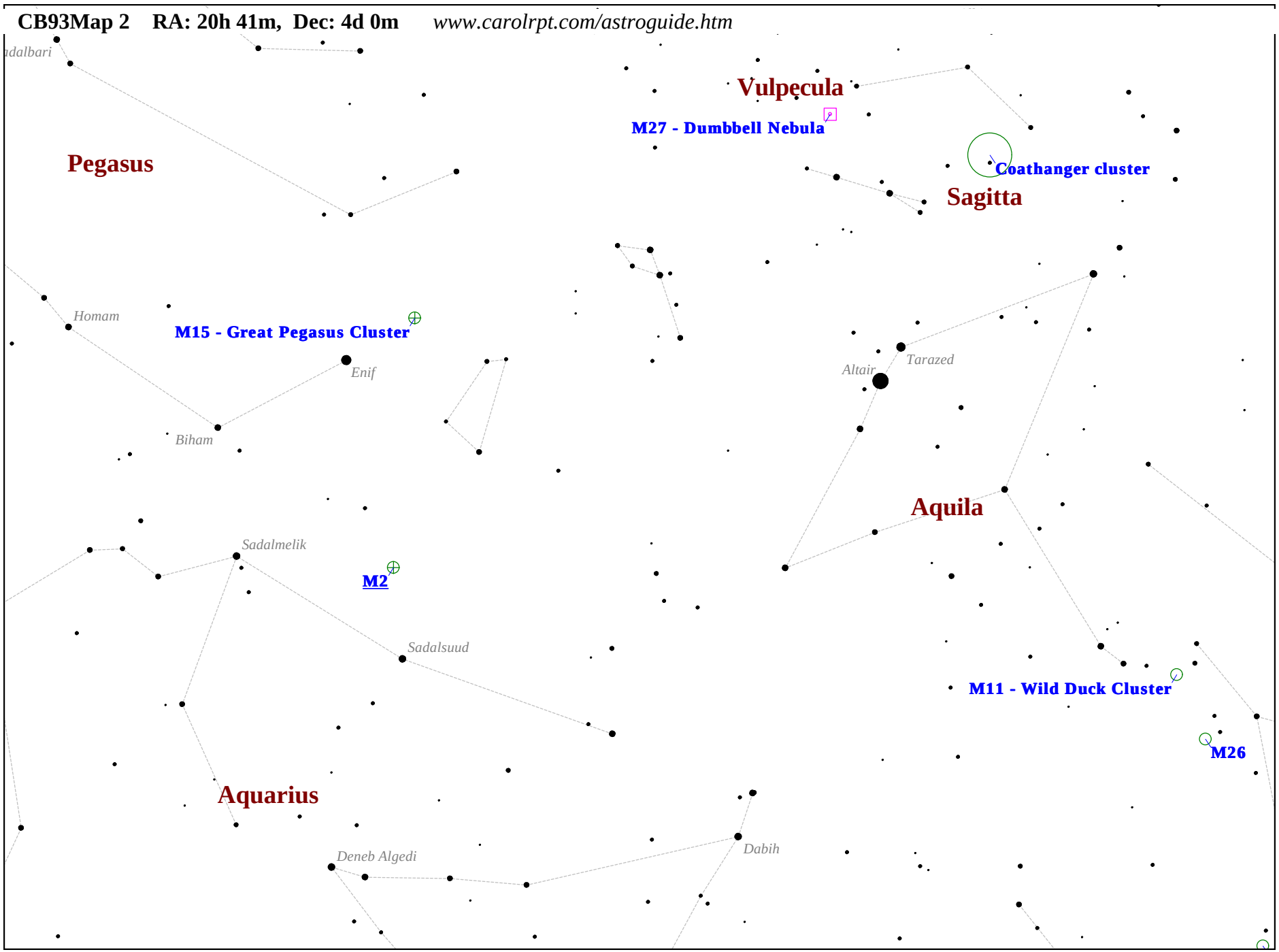
Object Id	Other Id	Type	R.A.	Decl.	Const	Mag 1	Description
NGC 224	M31 - Andromeda Galaxy	Gx	00 42 42.0	+41 16 00.0	And	3.40	CB93 Map 1 largest object in the sky
NGC 7089	M2	Gb	21 33 30.0	-00 49 00.0	Aqr	6.50	CB93 Map 2
NGC 2099	M37 - Auriga Salt-and-Pepper Cluster	OC	05 52 18.0	+32 33 00.0	Aur	5.60	CB93 Map 3
NGC 1960	M36 - Pinwheel Cluster	OC	05 36 18.0	+34 08 00.0	Aur	6.00	CB93 Map 3
NGC 1912	M38 - Starfish Cluster	OC	05 28 42.0	+35 51 00.0	Aur	6.40	CB93 Map 3
NGC 1502	Kemble's Cascade	OC	04 07 48.0	+62 20 00.0	Cam	6.90	CB93 Map 4
NGC 457	Dragonfly Cluster	OC	01 19 30.0	+58 17 00.0	Cas	6.40	CB93 Map 1
NGC 581	M103	OC	01 33 24.0	+60 39 00.0	Cas	7.40	CB93 Map 1 and 4
Stock 2		OC	02 15 00.0	+59 16 00.0	Cas	4.40	CB93 Map 1
NGC 2287	M41- Little Beehive	OC	06 46 00.0	-20 45 00.0	CMa	4.50	CB93 Map 5
NGC 2632	M44 - Praesepe, Beehive Cluster	OC	08 40 00.0	+19 40 00.0	Cnc	3.10	CB93 Map 5
NGC 2682	M67- King Cobra	OC	08 50 48.0	+11 49 00.0	Cnc	6.90	CB93 Map 5
NGC 4254	M99 - Coma PinWheel Galaxy	Gx	12 18 48.0	+14 25 00.0	Com	9.90	CB93 Map 6
NGC 5024	M53	Gb	13 12 54.0	+18 10 00.0	Com	7.70	CB93 Map 6
Mel 111	Berenice's Hair	OC	12 25 00.0	+26 00 00.0	Com	1.80	CB93 Map 6
NGC 4192	M98	Gx	12 13 48.0	+14 54 00.0	Com	10.10	CB93 Map 6
NGC 4826	M64 - Black-Eye Galaxy	Gx	12 56 42.0	+21 41 00.0	Com	8.50	CB93 Map 6
NGC 4501	M88 - Markarian's Chain	Gx	12 32 00.0	+14 25 00.0	Com	9.60	CB93 Map 6
NGC 4736	M94 - Croc's Eye	Gx	12 50 54.0	+41 07 00.0	CVn	8.20	CB93 Map 7 and 15
NGC 5272	M3	Gb	13 42 12.0	+28 23 00.0	CVn	6.40	CB93 Map 6
NGC 5055	M63 - Sunflower Galaxy	Gx	13 15 48.0	+42 02 00.0	CVn	8.60	CB93 Map 7 and 15
NGC 7092	M39	OC	21 32 12.0	+48 26 00.0	Cyg	4.60	CB93 Map 1 and 8
NGC 7000	North American Nebula	Nb	21 01 48.0	+44 12 00.0	Cyg	4.00	CB93 Map 8
NGC 6913	M29 - Cooling Tower	OC	20 23 54.0	+38 32 00.0	Cyg	6.60	CB93 Map 8
NGC 2168	M35	OC	06 08 12.0	+24 22 00.0	Gem	5.10	CB93 Map 3
NGC 6205	M13 - Great Hercules Cluster	Gb	16 41 42.0	+36 28 00.0	Her	5.90	CB93 Map 7 and 15
NGC 6341	M92	Gb	17 17 06.0	+43 08 00.0	Her	6.50	CB93 Map 7 and 15
NGC 4590	M68	Gb	12 39 30.0	-26 45 00.0	Hya	8.20	CB93 Map 9
NGC 5236	M83 - Southern Pinwheel	Gx	13 37 00.0	-29 52 00.0	Hya	7.50	CB93 Map 9
NGC 2548	M48	OC	08 13 42.0	-05 45 00.0	Hya	5.80	CB93 Map 5
NGC 3351	M95	Gx	10 44 00.0	+11 42 00.0	Leo	9.70	CB93 Map 10
NGC 3368	M96	Gx	10 46 48.0	+11 49 00.0	Leo	9.30	CB93 Map 10

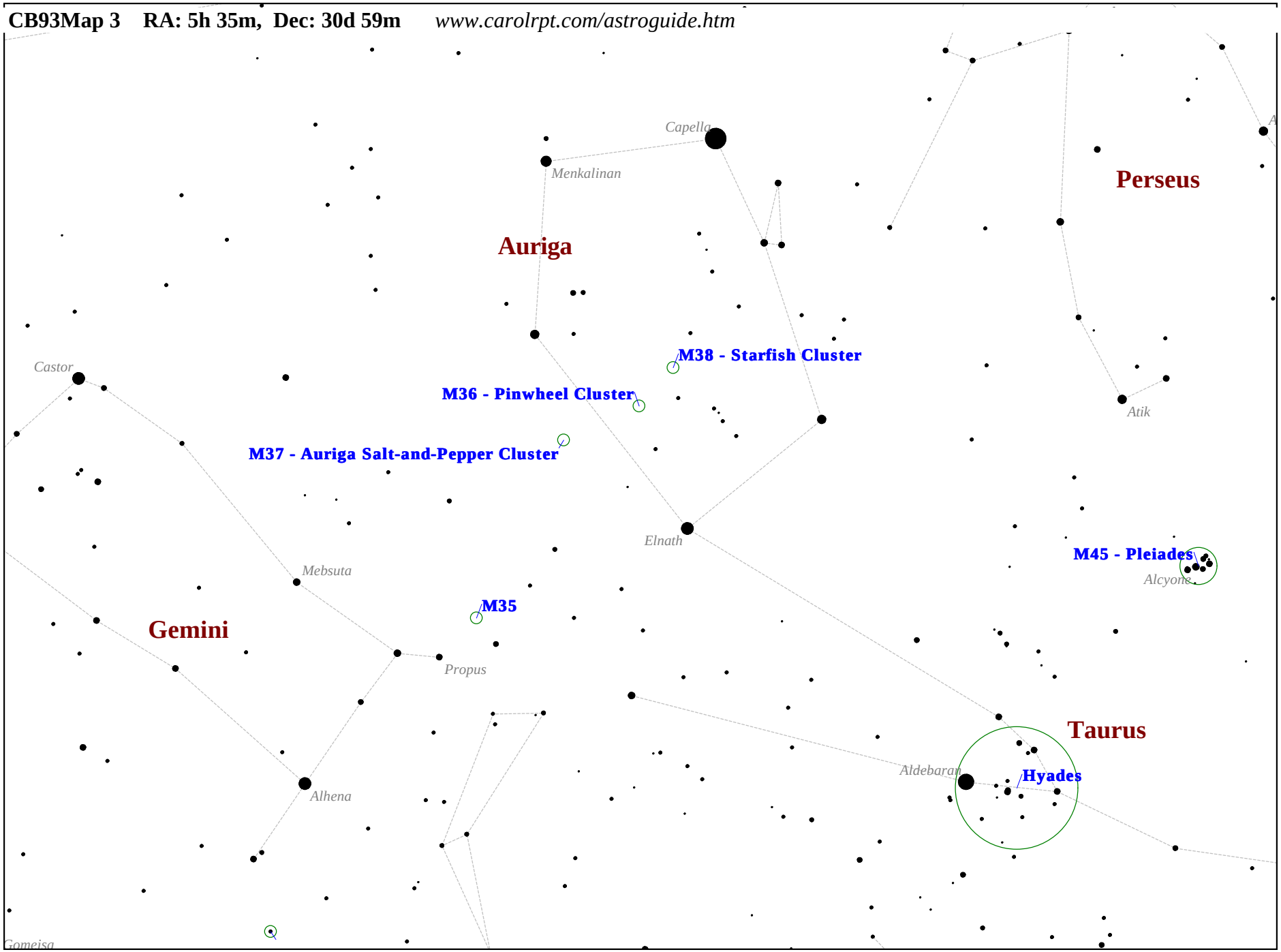
CB93 Best Objects in the Sky for Small Telescopes and Binoculars sorted by Constellation

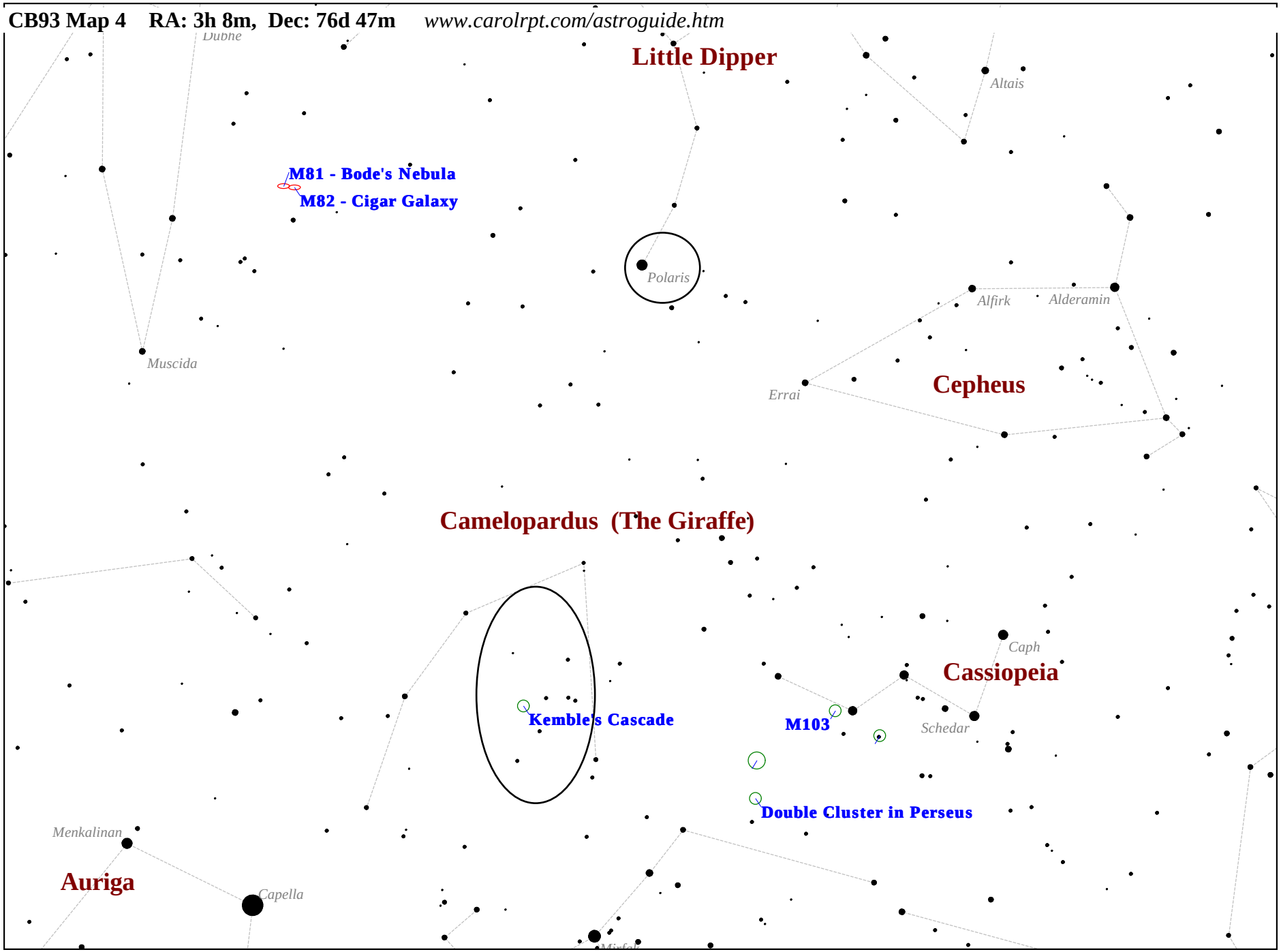
Object Id	Other Id	Type	R.A.	Decl.	Const	Mag 1	Description
NGC 3623	M65 - in the Leo Triplett	Gx	11 18 54.0	+13 05 00.0	Leo	9.30	CB93 Map 6 and 10
NGC 3627	M66 - in the Leo Triplett	Gx	11 20 12.0	+13 00 00.0	Leo	8.90	CB93 Map 6 and 10
NGC 6779	M56	Gb	19 16 36.0	+30 11 00.0	Lyr	8.30	CB93 Map 8
NGC 6720	M57 - Ring Nebula	Pl	18 53 36.0	+33 02 00.0	Lyr	9.40	CB93 Map 8
NGC 2323	M50 - Heart-Shaped Cluster	OC	07 02 30.0	-08 23 00.0	Mon	5.90	CB93 Map 5
NGC 2264	Christmas Tree Cluster	C+N	06 41 00.0	+09 54 00.0	Mon	3.90	CB93 Map 5
NGC 6333	M9	Gb	17 19 12.0	-18 31 00.0	Oph	7.90	CB93 Map 11 and 12
NGC 6254	M10	Gb	16 57 06.0	-04 06 00.0	Oph	6.60	CB93 Map 11
NGC 6171	M107	Gb	16 32 30.0	-13 03 00.0	Oph	8.10	CB93 Map 11
NGC 6273	M19	Gb	17 02 36.0	-26 16 00.0	Oph	7.20	CB93 Map 11 and 12
NGC 6402	M14	Gb	17 37 36.0	-03 15 00.0	Oph	7.60	CB93 Map 11
NGC 6218	M12 - Gumball Cluster	Gb	16 47 12.0	-01 57 00.0	Oph	6.60	CB93 Map 11
NGC 6266	M62- Flickering Globular	Gb	17 01 12.0	-30 07 00.0	Oph	6.60	CB93 Map 12
NGC 1976	M42 - Great Orion Nebula	C+N	05 35 18.0	-05 23 00.0	Ori	4.00	CB93 Map 5
NGC 7078	M15 - Great Pegasus Cluster	Gb	21 30 00.0	+12 10 00.0	Peg	6.40	CB93 Map 2
NGC 1039	M34 - Spiral Cluster	OC	02 42 06.0	+42 47 00.0	Per	5.20	CB93 Map 1
NGC 869	Double Cluster in Perseus	OC	02 19 06.0	+57 08 00.0	Per	5.30	CB93 Map 1 and 4
Mel 20	Cr 39	OC	03 22 00.0	+49 00 00.0	Per	1.20	CB93 Map 1 use binoculars
NGC 2422	M47	OC	07 36 36.0	-14 29 00.0	Pup	4.40	CB93 Map 5
NGC 2477	OCL 720	OC	07 52 12.0	-38 32 00.0	Pup	5.80	CB93 Map 5
NGC 2447	M93 - Butterfly Cluster	OC	07 44 30.0	-23 51 00.0	Pup	6.20	CB93 Map 5
NGC 6121	M4 - Cat's Eye	Gb	16 23 36.0	-26 32 00.0	Sco	5.90	CB93 Map 11 and 12
NGC 6475	M7 - Scorpions Tail	OC	17 53 54.0	-34 48 00.0	Sco	3.30	CB93 Map 12
NGC 6124	Dunlop 514	OC	16 25 18.0	-40 39 00.0	Sco	5.80	CB93 Map 12
NGC 6405	M6 - Butterfly Cluster	OC	17 40 18.0	-32 15 00.0	Sco	4.20	CB93 Map 12
Cr 316	False Comet	OC	16 55 30.0	-40 50 00.0	Sco	3.40	CB93 Map 12
NGC 6093	M80	Gb	16 17 00.0	-22 59 00.0	Sco	7.20	CB93 Map 12
NGC 6705	M11 - Wild Duck Cluster	OC	18 51 06.0	-06 16 00.0	Sct	5.80	CB93 Map 2, 11 and 14
NGC 6694	M26	OC	18 45 12.0	-09 24 00.0	Sct	8.00	CB93 Map 2, 11 and 14
NGC 5904	M5	Gb	15 18 36.0	+02 05 00.0	Ser	5.80	CB93 Map 11
NGC 6611	M16 - Eagle Nebula	C+N	18 18 48.0	-13 47 00.0	Ser	6.00	CB93 Map 11 and 14
NGC 6523	M8 - Lagoon Nebula	C+N	18 03 42.0	-24 23 00.0	Sgr	5.00	CB93 Map13 and 14

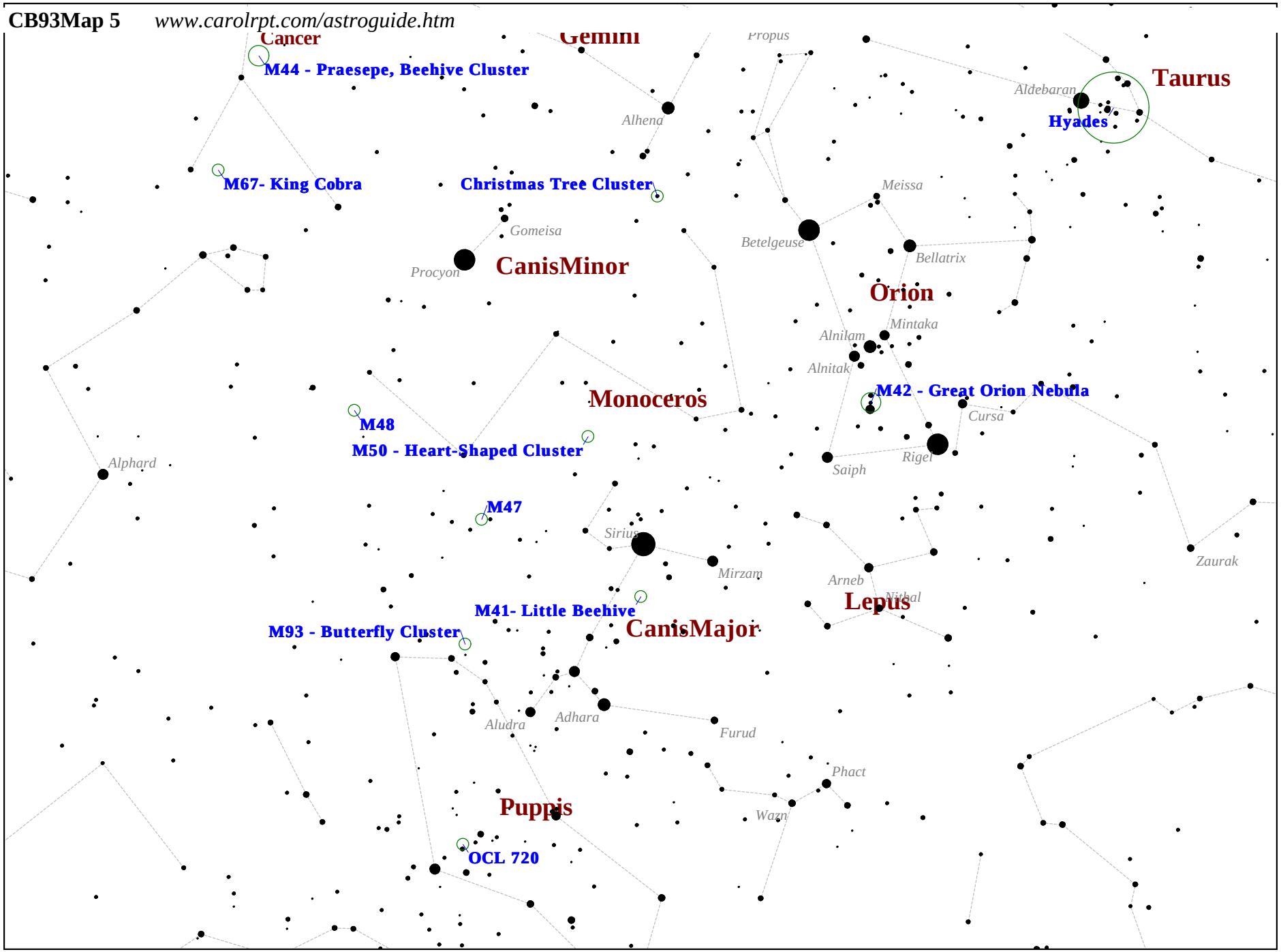
Object Id	Other Id	Type	R.A.	Decl.	Const	Mag 1	Description
IC 4715	M24 - Sagittarius Star Cloud	OC	18 26 36.0	-18 23 00.0	Sgr	3.10	CB93 Map 14
NGC 6626	M28	Gb	18 24 30.0	-24 52 00.0	Sgr	6.90	CB93 Map 13 and 14
NGC 6809	M55- The Spectre	Gb	19 40 00.0	-30 58 00.0	Sgr	7.00	CB93Map 13 and 14
NGC 6618	M17 - Swan Nebula	C+N	18 20 48.0	-16 11 00.0	Sgr	6.00	CB93 Map 11 and 14 no stars, looks like checkmark
NGC 6715	M54	Gb	18 55 06.0	-30 29 00.0	Sgr	7.70	CB93 Map 13 and 14
NGC 6656	M22 - Great Sagittarius Cluster	Gb	18 36 24.0	-23 54 00.0	Sgr	5.10	CB93 Map 12 and 13 one of finest globs
NGC 6494	M23	OC	17 57 06.0	-18 59 00.0	Sgr	5.50	CB93 Map 14
NGC 6637	M69	Gb	18 31 24.0	-32 21 00.0	Sgr	7.70	CB93 Map 13 and 14
NGC 6681	M70	Gb	18 43 12.0	-32 18 00.0	Sgr	8.10	CB93 Map 13 and 14
NGC 6864	M75	Gb	20 06 06.0	-21 55 00.0	Sgr	8.60	CB93 Map 14
NGC 6514	M20 - Trifid Nebula	C+N	18 02 42.0	-22 58 00.0	Sgr	6.30	CB93 Map 11
NGC 6531	M21	OC	18 04 12.0	-22 29 00.0	Sgr	5.90	CB93 Map 14
IC 4725	M25	OC	18 31 48.0	-19 07 00.0	Sgr	4.60	CB93 Map 14
NGC 6613	M18 - Black Swan	OC	18 19 54.0	-17 08 00.0	Sgr	6.90	CB93 Map 11 and 14
Mel 25	Hyades	OC	04 27 00.0	+16 00 00.0	Tau	0.50	CB93 Map 3 and 5
Mel 22	M45 - Pleiades	C+N	03 47 00.0	+24 07 00.0	Tau	1.20	CB93 Map 1 and 3
NGC 598	M33 - Pinwheel Galaxy	Gx	01 33 54.0	+30 39 00.0	Tri	5.70	CB93 Map 1
NGC 3034	M82 - Cigar Galaxy	Gx	09 55 54.0	+69 41 00.0	UMa	8.40	CB93 Map 4 and 15
NGC 5457	M101 - Pinwheel Galaxy	Gx	14 03 12.0	+54 21 00.0	UMa	7.90	CB93 Map 15
NGC 3587	M97 - Owl Nebula	Pl	11 14 48.0	+55 01 00.0	UMa	11.00	CB93 Map 15
NGC 3031	M81 - Bode's Nebula	Gx	09 55 36.0	+69 04 00.0	UMa	6.90	CB93 Map 4 and 15
NGC 4552	M89	Gx	12 35 42.0	+12 33 00.0	Vir	9.80	CB93 Map 6
NGC 4569	M90	Gx	12 36 48.0	+13 10 00.0	Vir	9.50	CB93 Map 6
NGC 4406	M86 - Markarian's chain	Gx	12 26 12.0	+12 57 00.0	Vir	8.90	CB93 Map 6
NGC 4374	M84 - Markarian's Chain	Gx	12 25 06.0	+12 53 00.0	Vir	9.10	CB93 Map 6
NGC 4486	M87 - Virgo A	Gx	12 30 48.0	+12 23 00.0	Vir	8.60	CB93 Map 6
NGC 4594	M104 - Sombrero Galaxy	Gx	12 40 00.0	-11 37 00.0	Vir	8.00	CB93 Map 9
Cr 399	Coathanger cluster	OC	19 25 24.0	+20 11 00.0	Vul	3.60	CB93 Map 2 and 8 easy naked eye
NGC 6853	M27 - Dumbbell Nebula	Pl	19 59 36.0	+22 43 00.0	Vul	7.30	CB93 Map 2 and 8

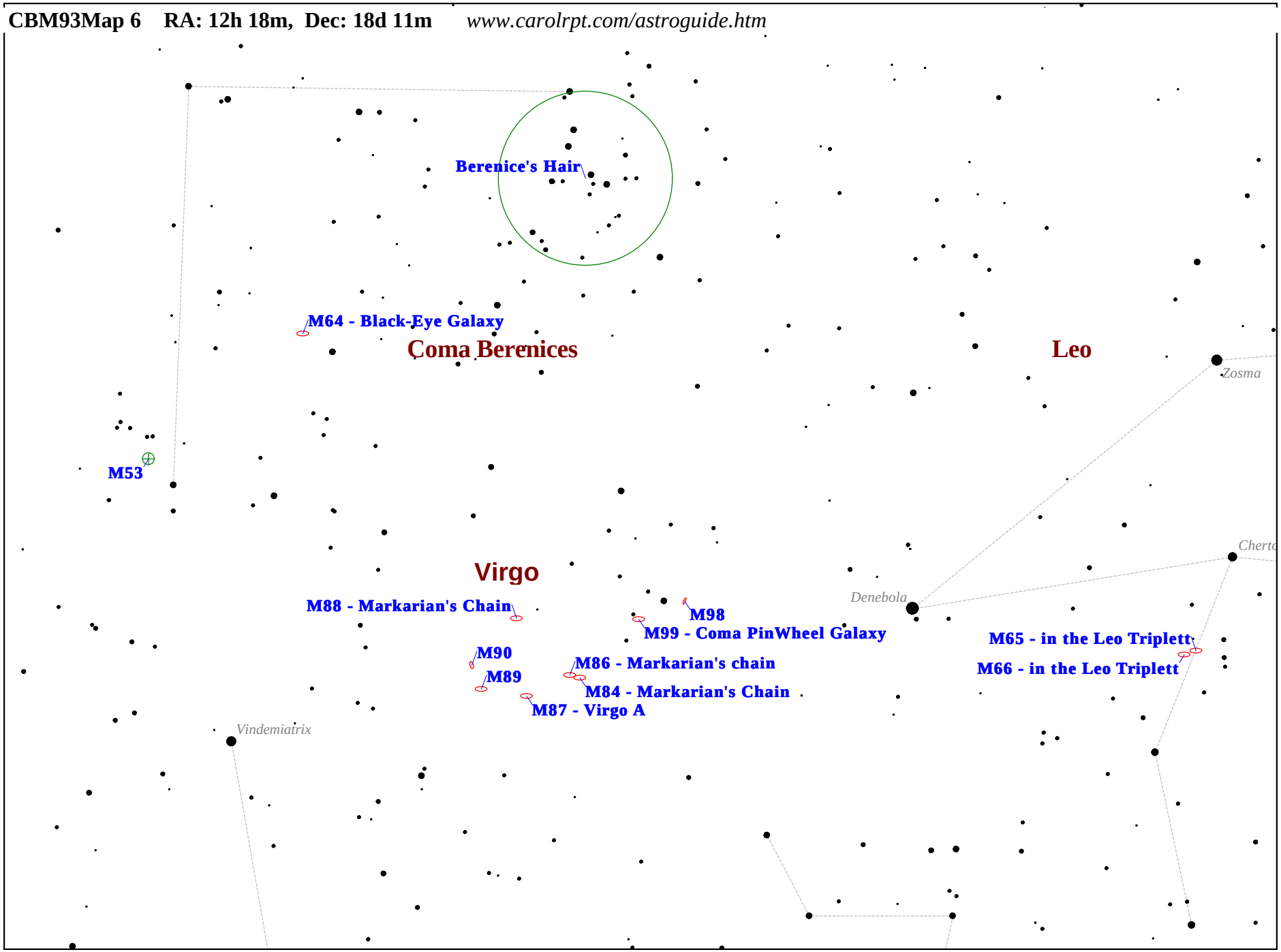

CB93Map 1 RA: 0h 58m, Dec: 39d 44m www.carolrpt.com/astroguide.htm
Cassiopeia
Caph
Stock 2
M103
Double Cluster in Perseus
Dragonfly Cluster
M39
Mirfak
Schedar
Cr 39
Lacerta
Perseus
M34 - Spiral Cluster
Algol
Almach
Atik
M31 - Andromeda Galaxy
Andromeda
Mirach
Matar
M45 - Pleiades
Triangulum
M33 - Pinwheel Galaxy
Scheat
Sadalbari
Alpheratz
Hamal
Pegasus
Aries
Sheratan
Markab
Homam
Algenib

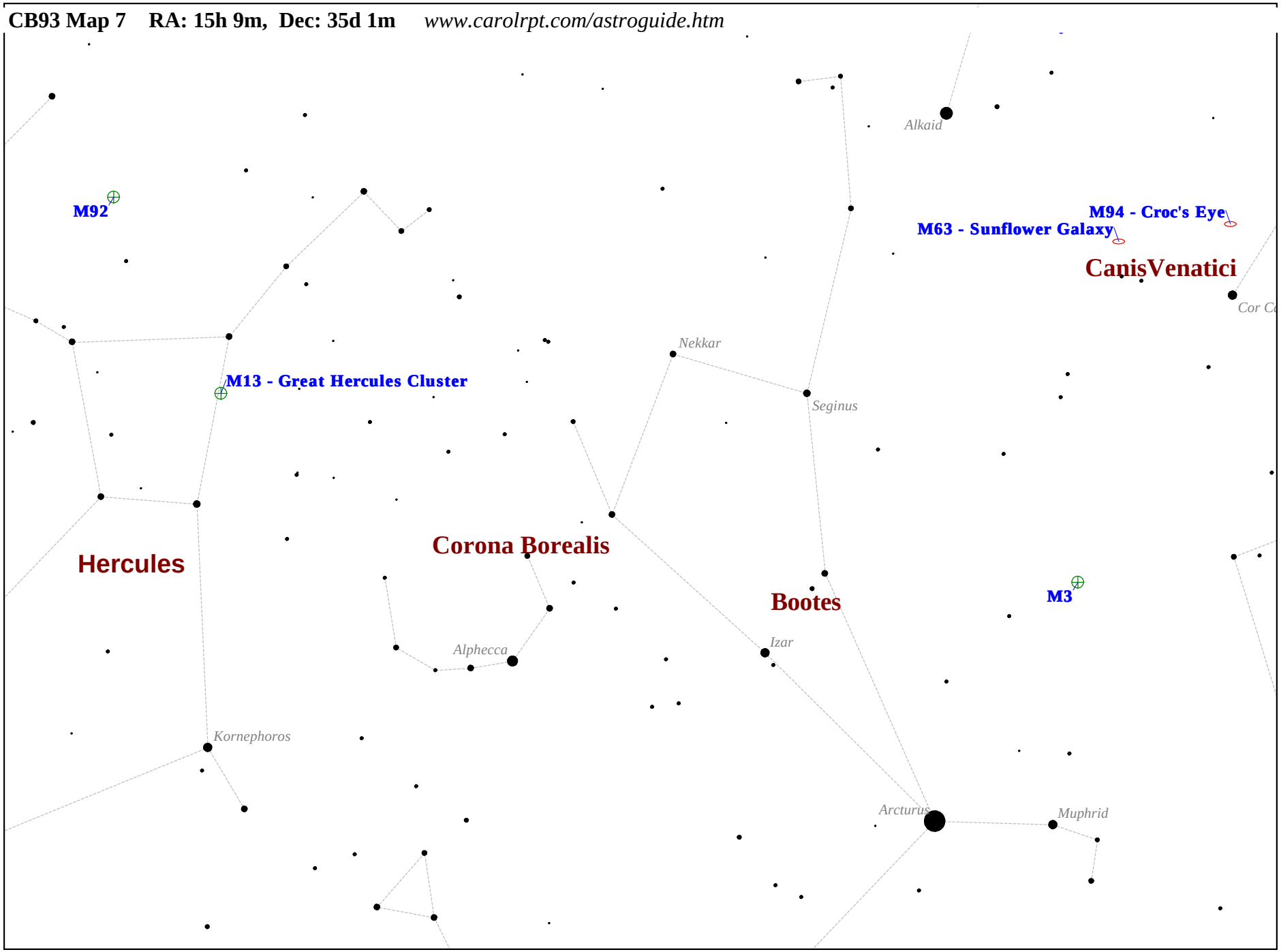

CB93Map 2 RA: 20h 41m, Dec: 4d 0m www.carolrpt.com/astroguide.htm
Vulpecula
M27 - Dumbbell Nebula
Pegasus
Coathanger cluster
Sagitta
Homam
M15 - Great Pegasus Cluster
Enif
Altair
Tarazed
Biham
Aquila
Sadalmelik
M2
Sadalsuud
M11 - Wild Duck Cluster
M26
Aquarius
Deneb Algedi
Dabih

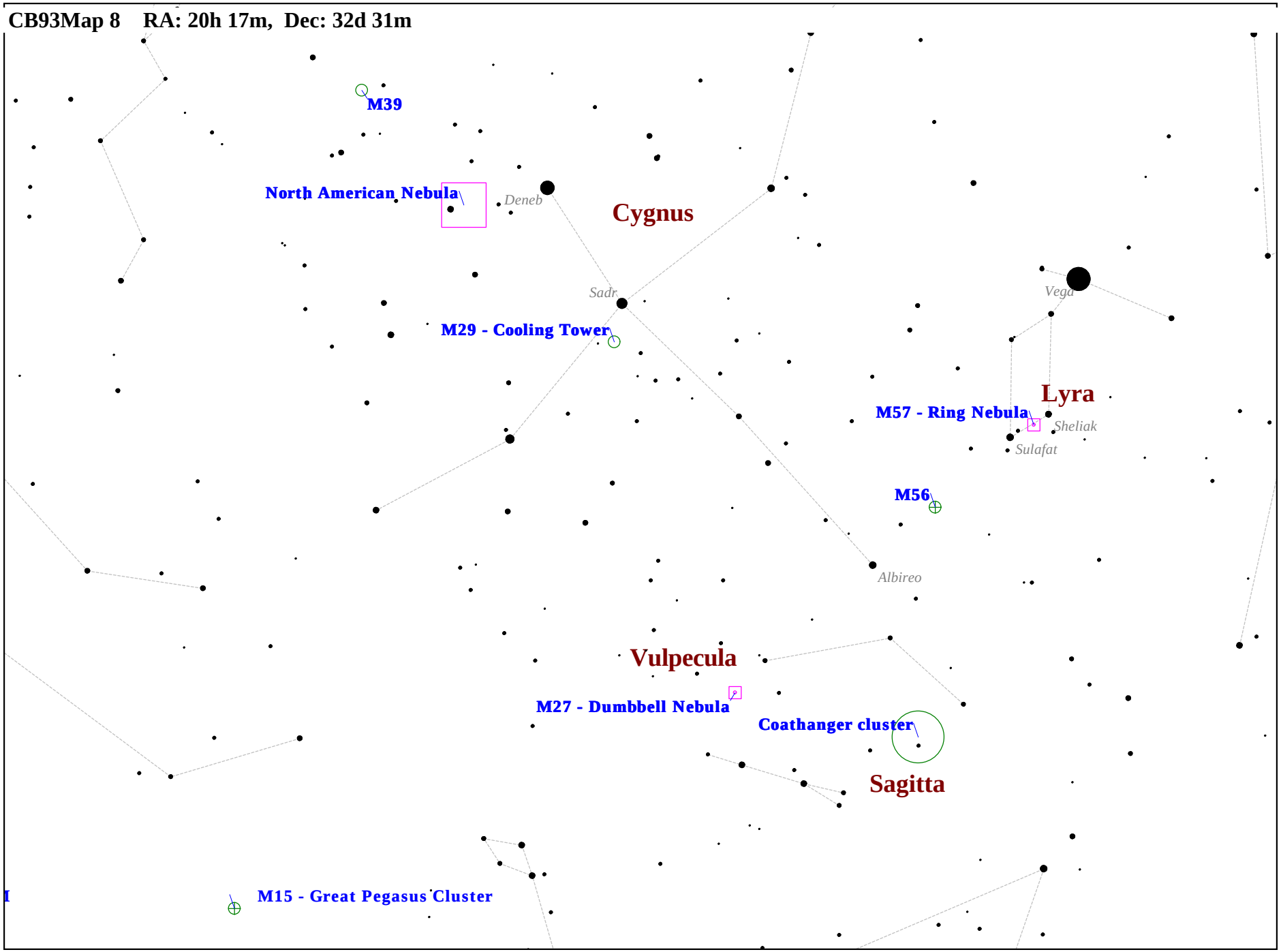

CB93Map 3 RA: 5h 35m, Dec: 30d 59m www.carolrpt.com/astroguide.htm
Capella
Menkalinan
Perseus
Auriga
M38 - Starfish Cluster
Castor
M36 - Pinwheel Cluster
Atik
M37 - Auriga Salt-and-Pepper Cluster
Elnath
M45 - Pleiades
Alcyone
Mebsuta
M35
Gemini
Propus
Taurus
Aldebaran
Hyades
Alhena
Gomeisa

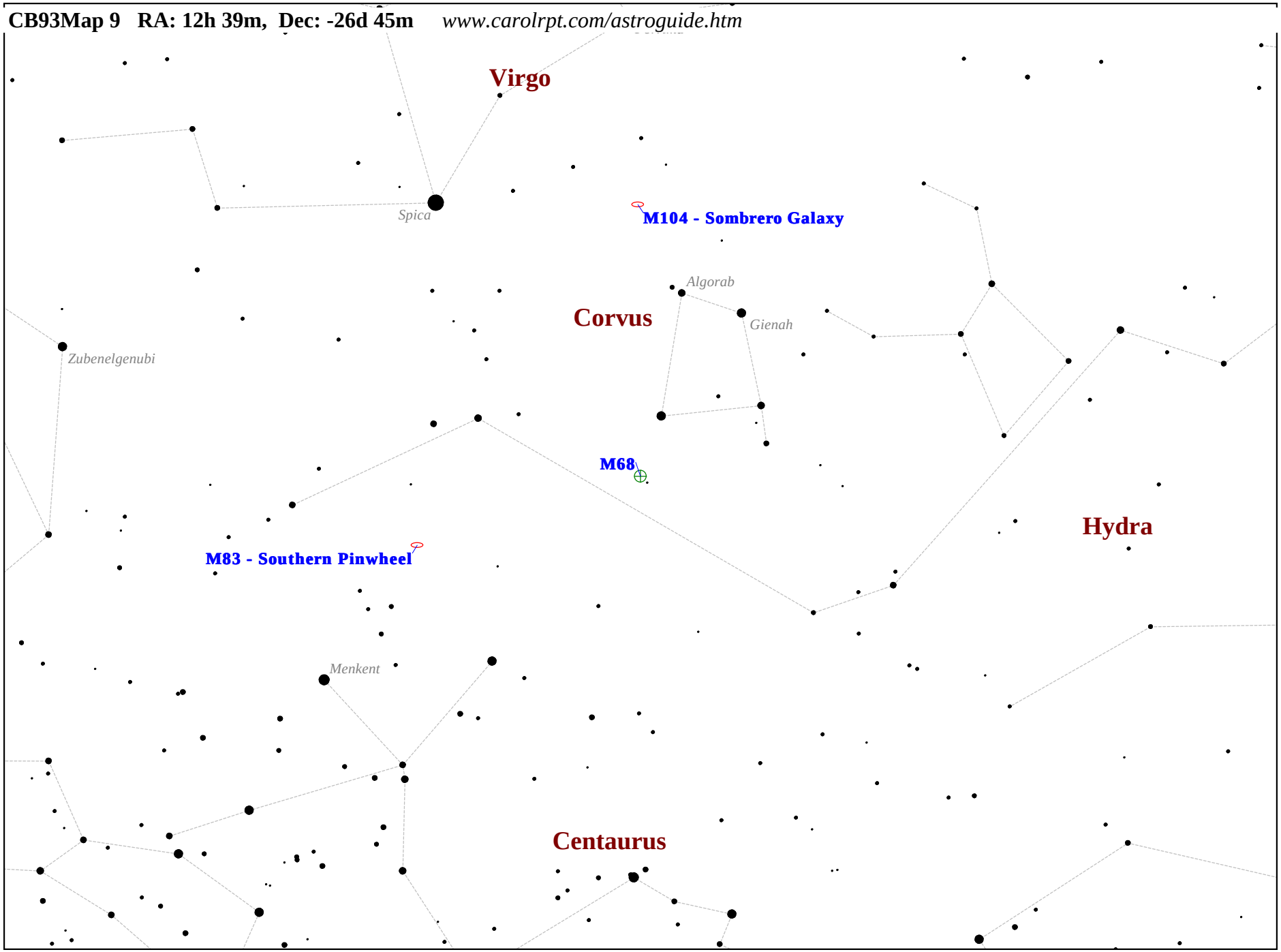

CB93 Map 4 RA: 3h 8m, Dec: 76d 47m www.carolrpt.com/astroguide.htm
Dubhe
Little Dipper
Altais
M81 - Bode's Nebula
M82 - Cigar Galaxy
Polaris
Alfirk
Alderamin
Muscida
Errai
Cepheus
Camelopardus (The Giraffe)
Caph
Cassiopeia
Kemble's Cascade
M103
Schedar
Double Cluster in Perseus
Menkalinan
Auriga
Capella


CB93Map 5
www.carolrpt.com/astroguide.htm
Cancer
M44 - Praesepe, Beehive Cluster
Gemini
Propus
Taurus
Aldebaran
Hyades
Alhena
M67- King Cobra
Christmas Tree Cluster
Meissa
Gomeisa
Betelgeuse
Bellatrix
Procyon
CanisMinor
Orion
Mintaka
Alnilam
Alnitak
M42 - Great Orion Nebula
Monoceros
Cursa
M48
M50 - Heart-Shaped Cluster
Rigel
Saiph
Alphard
M47
Sirius
Mirzam
Zaurak
Arneb
Nihal
Lepus
M41- Little Beehive
M93 - Butterfly Cluster
CanisMajor
Adhara
Aludra
Furud
Phact
Puppis
Wazn
OCL 720

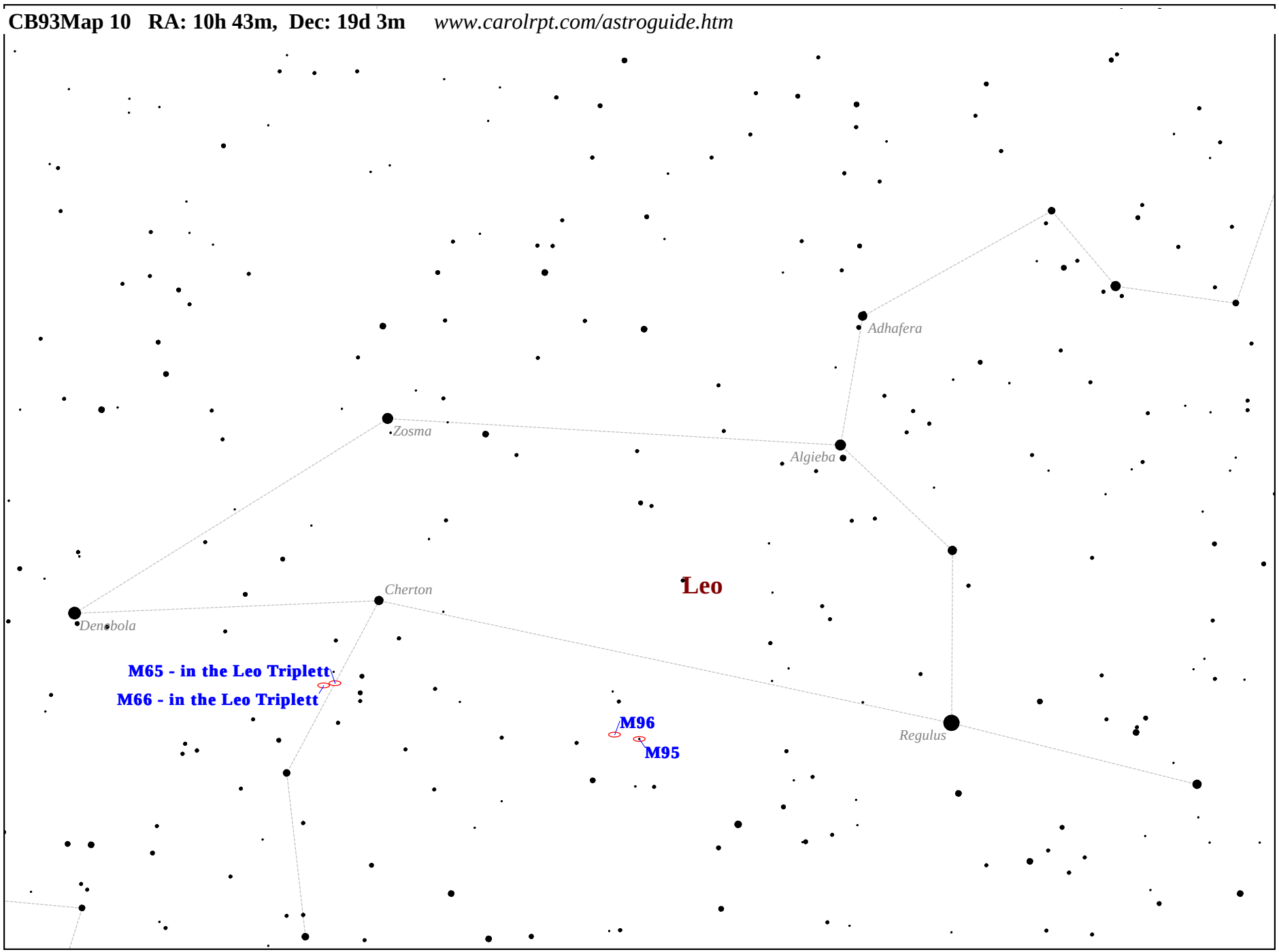

CBM93Map 6 RA: 12h 18m, Dec: 18d 11m www.carolrpt.com/astroguide.htm
Berenice's Hair
M64 - Black-Eye Galaxy
Coma Berenices
Leo
Zosma
M53
Virgo
Denebola
Chertd
M88 - Markarian's Chain
M98
M99 - Coma PinWheel Galaxy
M65 - in the Leo Triplett
M66 - in the Leo Triplett
M90
M86 - Markarian's chain
M89
M84 - Markarian's Chain
M87 - Virgo A
Vindemiatrix

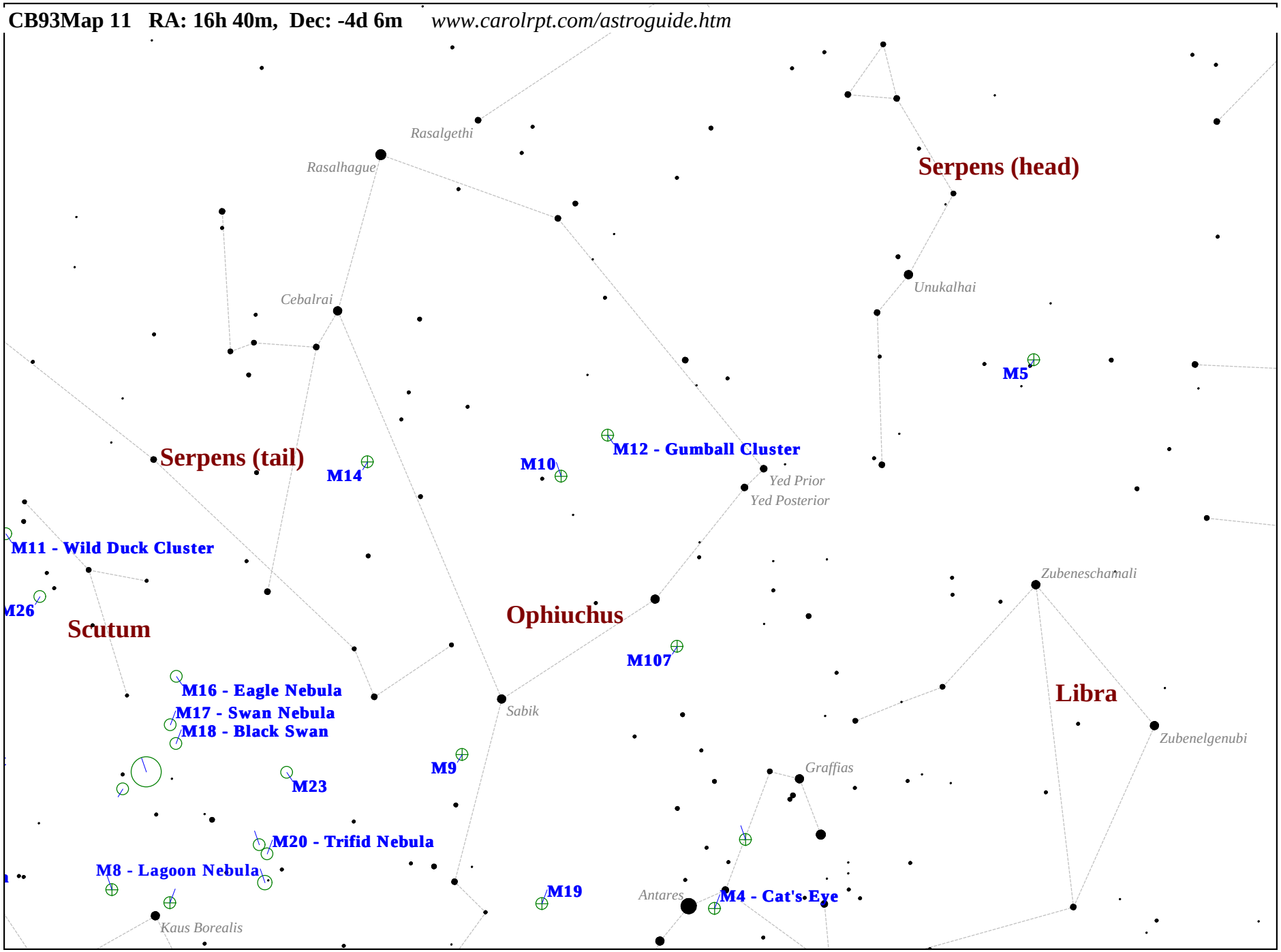

CB93 Map 7 RA: 15h 9m, Dec: 35d 1m www.carolrpt.com/astroguide.htm
Alkaid
M92
M94 - Croc's Eye
M63 - Sunflower Galaxy
CanisVenatici
Nekkar
M13 - Great Hercules Cluster
Seginus
Hercules
Corona Borealis
Bootes
M3
Alphecca
Izar
Kornephoros
Arcturus
Muphrid

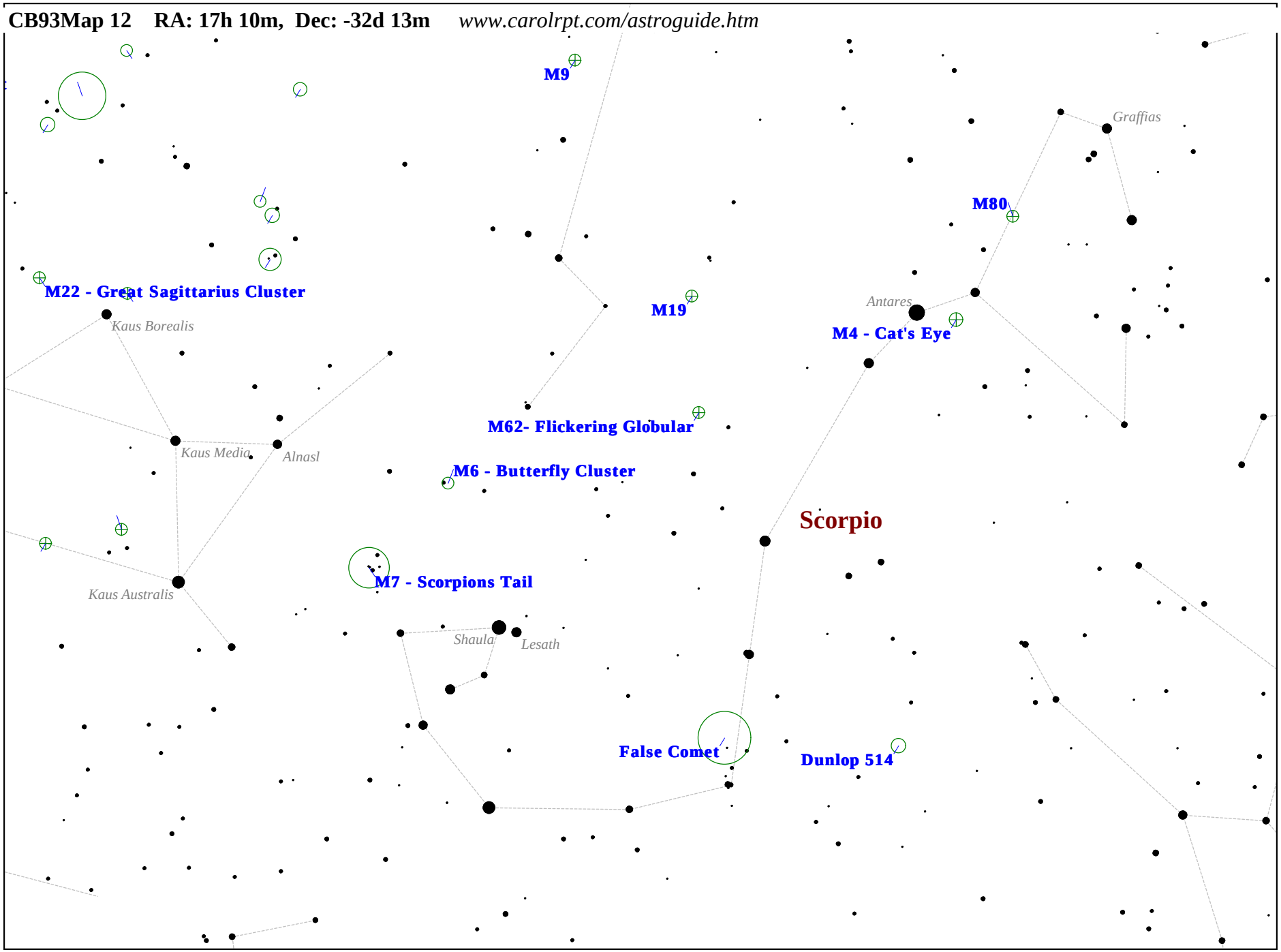

CB93Map 8 RA: 20h 17m, Dec: 32d 31m
M39
North American Nebula
Deneb
Cygnus
Sadr
Vega
M29 - Cooling Tower
Lyra
M57 - Ring Nebula
Sheliak
Sulafat
M56
Albireo
Vulpecula
M27 - Dumbbell Nebula
Coathanger cluster
Sagitta
M15 - Great Pegasus Cluster

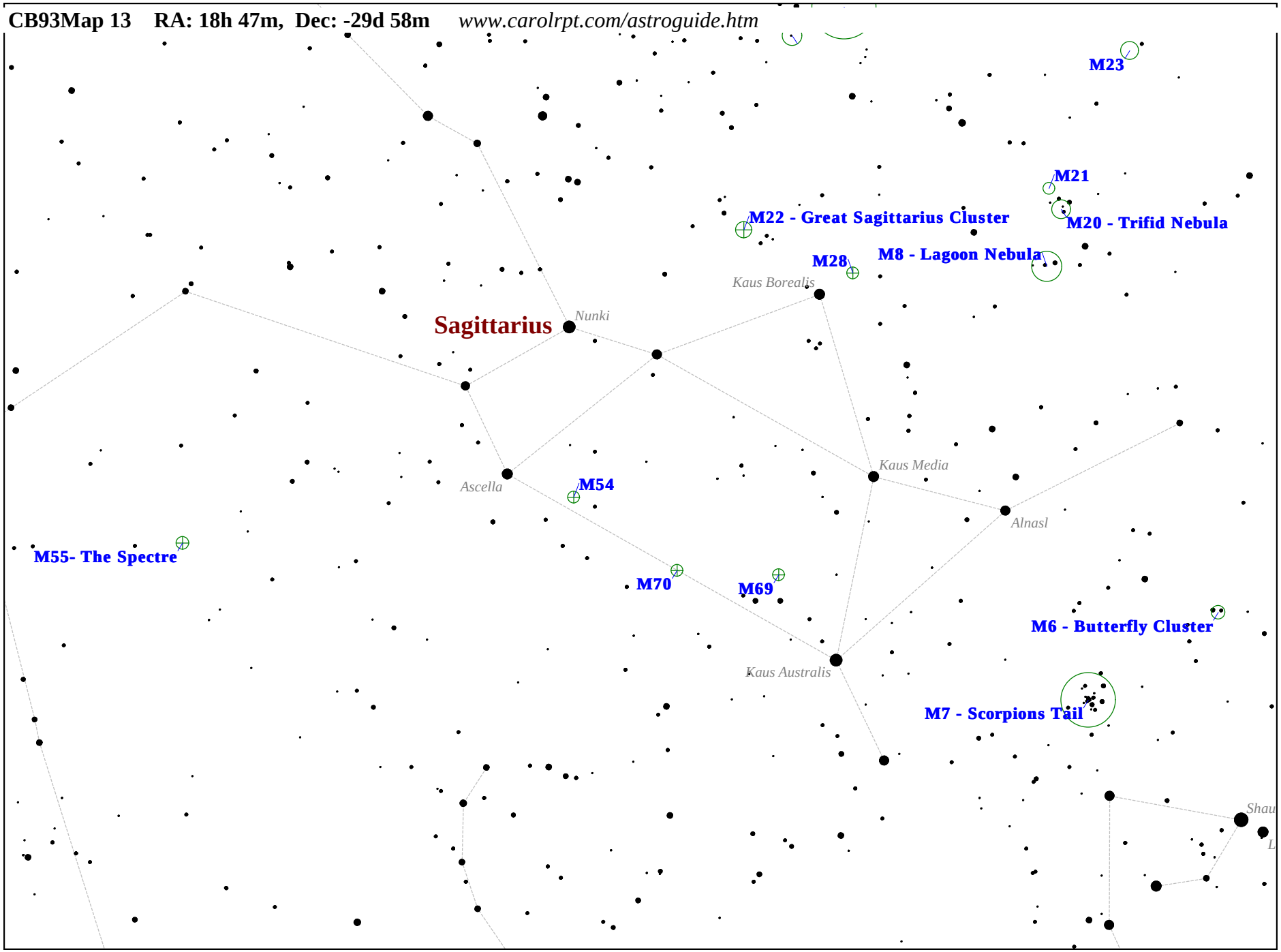

CB93Map 9 RA: 12h 39m, Dec: -26d 45m
www.carolrpt.com/astroguide.htm
Virgo
Spica
M104 - Sombrero Galaxy
Algorab
Corvus
Gienah
Zubenelgenubi
M68
Hydra
M83 - Southern Pinwheel
Menkent
Centaurus

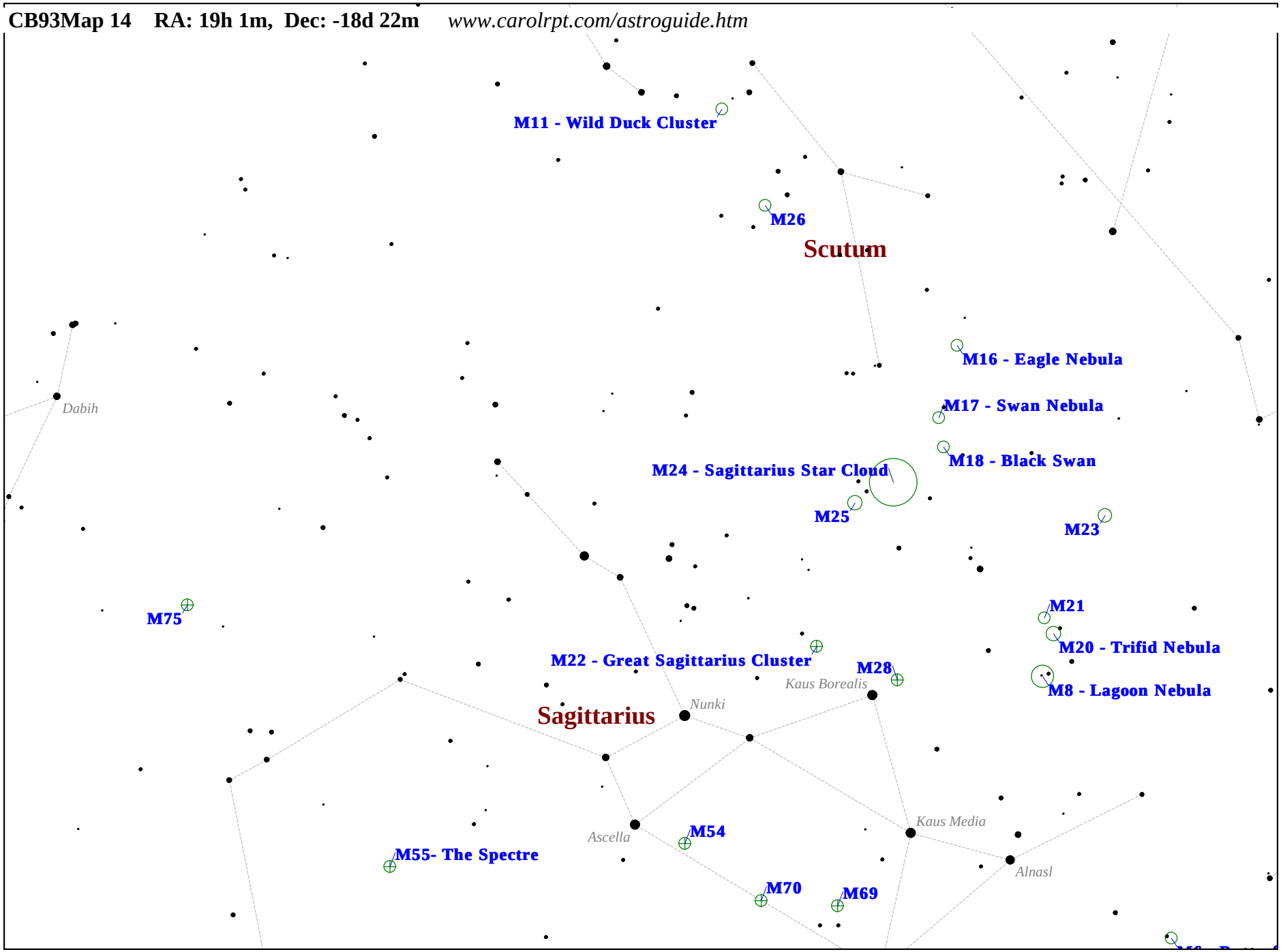
CB93Map 10 RA: 10h 43m, Dec: 19d 3m *www.carolrpt.com/astroguide.htm*

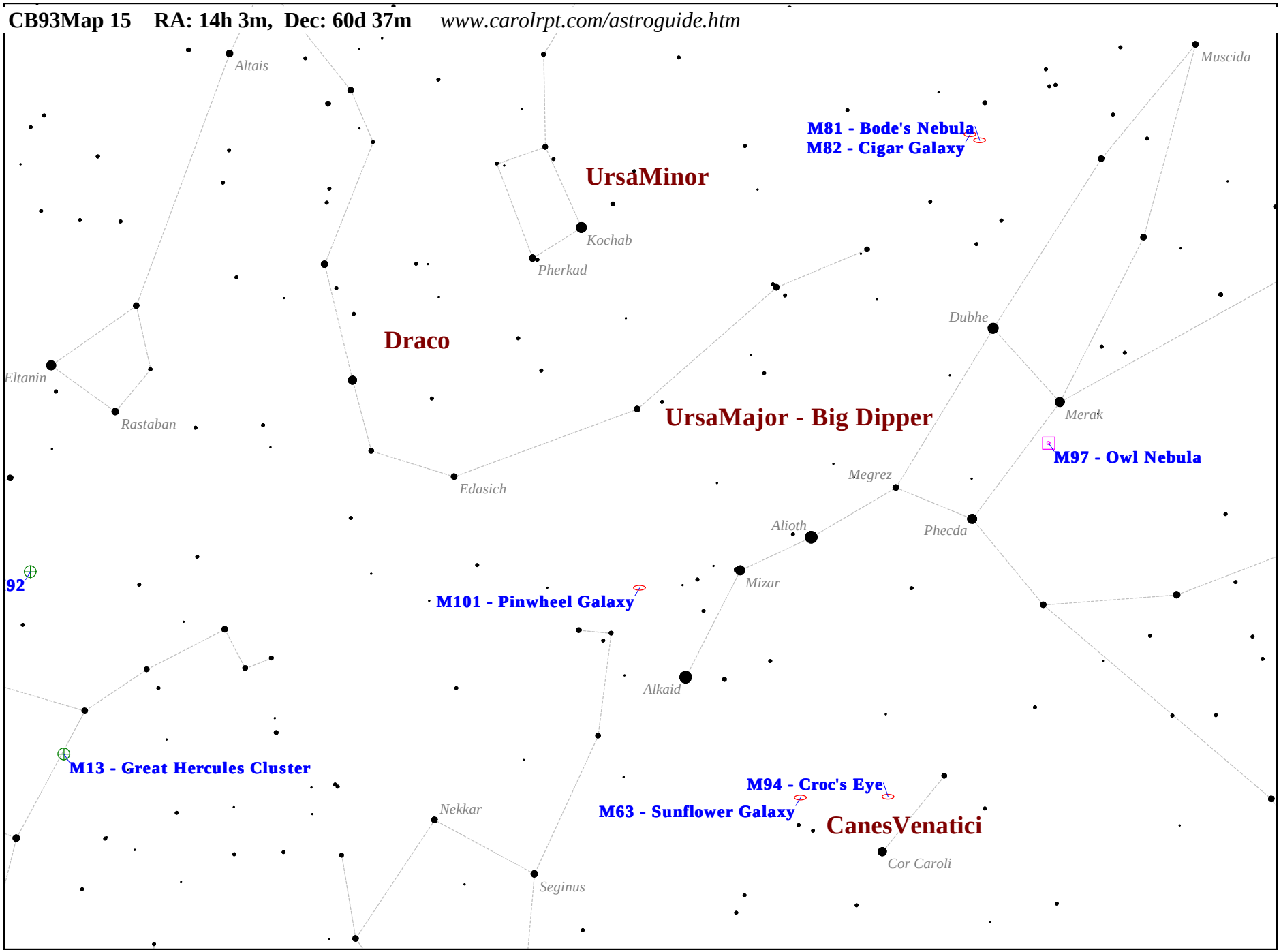



CB93Map 11 RA: 16h 40m, Dec: -4d 6m
www.carolrpt.com/astroguide.htm
Rasalgethi
Rasalhague
Serpens (head)
Unukalhai
Cebalrai
M5
Serpens (tail)
M14
M10
M12 - Gumball Cluster
Yed Prior
Yed Posterior
M11 - Wild Duck Cluster
M26
Scutum
Ophiuchus
Zubeneschamali
M107
M16 - Eagle Nebula
M17 - Swan Nebula
M18 - Black Swan
Sabik
Libra
Zubenelgenubi
M9
M23
Graffias
M20 - Trifid Nebula
M8 - Lagoon Nebula
M19
Antares
M4 - Cat's Eye
Kaus Borealis


CB93Map 12 RA: 17h 10m, Dec: -32d 13m www.carolrpt.com/astroguide.htm
M9
Graffias
M80
M22 - Great Sagittarius Cluster
Kaus Borealis
M19
Antares
M4 - Cat's Eye
M62- Flickering Globular
Kaus Media
Alnasl
M6 - Butterfly Cluster
Scorpio
M7 - Scorpions Tail
Kaus Australis
Shaula
Lesath
False Comet
Dunlop 514


CB93Map 13 RA: 18h 47m, Dec: -29d 58m www.carolrpt.com/astroguide.htm
M23
M21
M22 - Great Sagittarius Cluster
M20 - Trifid Nebula
M28
M8 - Lagoon Nebula
Kaus Borealis
Sagittarius
Nunki
Kaus Media
Ascella
M54
Alnasl
M55- The Spectre
M70
M69
M6 - Butterfly Cluster
Kaus Australis
M7 - Scorpions Tail
Shau


CB93Map 14 RA: 19h 1m, Dec: -18d 22m www.carolrpt.com/astroguide.htm
M11 - Wild Duck Cluster
M26
Scutum
M16 - Eagle Nebula
M17 - Swan Nebula
M18 - Black Swan
M24 - Sagittarius Star Cloud
M25
M23
Dabih
M75
M21
M20 - Trifid Nebula
M22 - Great Sagittarius Cluster
M28
Kaus Borealis
M8 - Lagoon Nebula
Nunki
Sagittarius
Kaus Media
Ascella
M54
M55- The Spectre
Alnasl
M70
M69


CB93Map 15 RA: 14h 3m, Dec: 60d 37m www.carolrpt.com/astroguide.htm
Altais
Muscida
M81 - Bode's Nebula
M82 - Cigar Galaxy
UrsaMinor
Kochab
Pherkad
Draco
Dubhe
Eltanin
Rastaban
UrsaMajor - Big Dipper
Merak
M97 - Owl Nebula
Megrez
Edasich
Alioth
Phecda
92
M101 - Pinwheel Galaxy
Mizar
Alkaid
M13 - Great Hercules Cluster
M94 - Croc's Eye
Nekkar
M63 - Sunflower Galaxy
CanesVenatici
Cor Caroli
Seginus

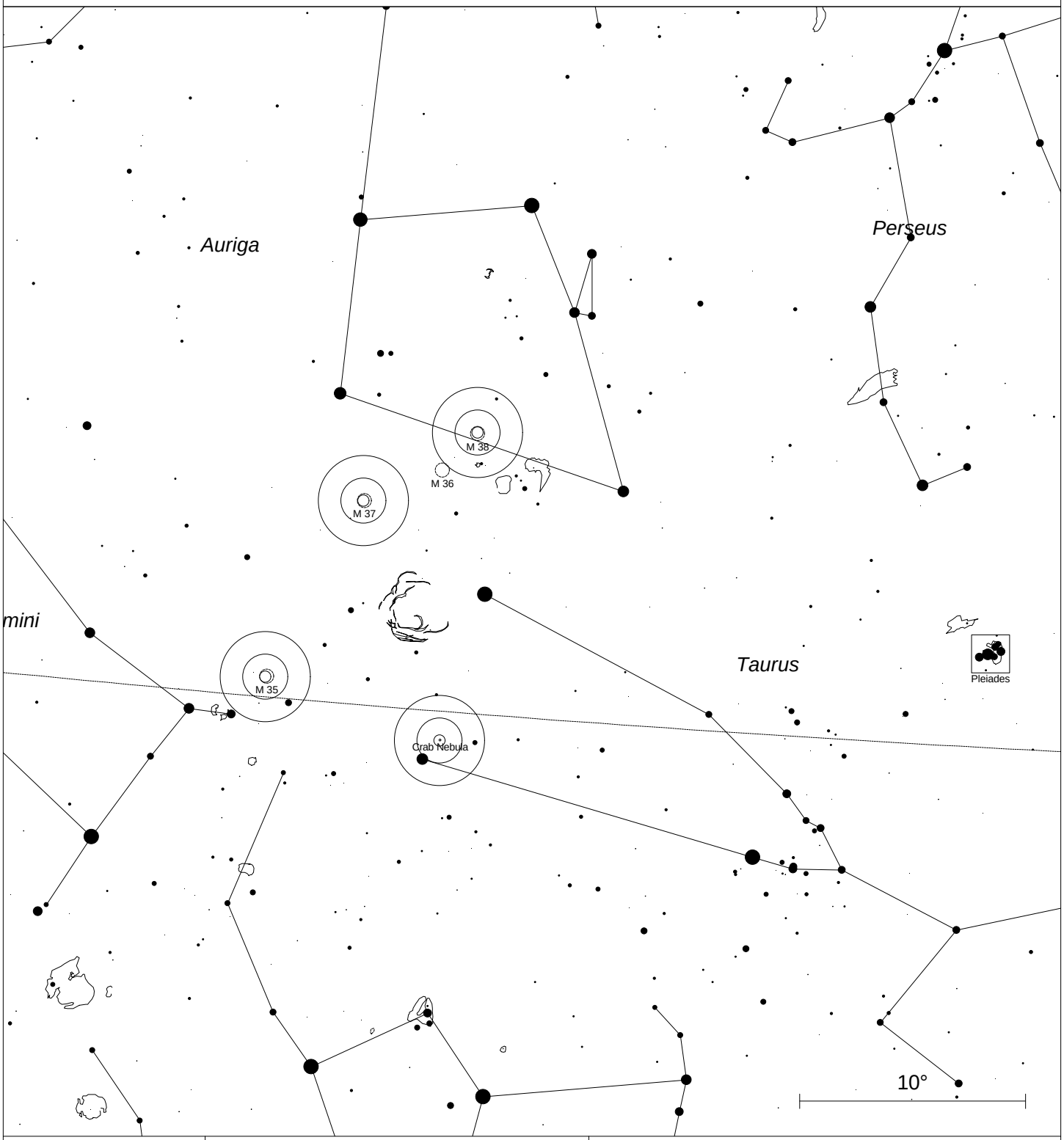
Map and Constallation Key to Messier Objects for TELRAD Finders

Messier Object	Constallation	Telrad Map #'s	Common Name	Type	Distance Light Years	Other Data
M1	Taurus	Map 1, 2	Crab Nebula	Supernova	6,000	
M2	Aquarius	Map 11		Glob. Cluster		
M3	Canies Venatici	Map 6, 7		Glob. Cluster	30,000	44500 Stars
M4	Scorpius	Map 13		Glob. Cluster		
M5	Serpens	Map 6		Glob. Cluster		
M6	Scorpius	Map 10, 13	Butterfly Cluster	Open Cluster	2,000	
M7	Scorpius	Map 10, 13		Open Cluster		
M8	Sagittarius	Map 10	Lagoon Nebula	Emmi. Nebula	2,500	
M9	Ophiuchus	Map 12,10,13		Glob. Cluster		
M10	Ophiuchus	Map 12		Glob. Cluster		
M11	Scutum	Map 12	Wild Duck Cluster	Open Cluster		
M12	Ophiuchus	Map 12		Glob. Cluster		
M13	Hercules	Map 9		Glob. Cluster	25,000	
M14	Ophiuchus	Map 12, 10		Glob. Cluster		
M15	Pegasus	Map 11		Glob. Cluster		
M16	Serpens	Map 10	Star-Queen/Eagle	Emmi. Nebula		
M17	Sagittarius	Map 10	Swan/Omega Nebula	Emmi. Nebula		35 Stars
M18	Sagittarius	Map 10		Open Cluster	6,000	
M19	Ophiuchus	Map 13		Glob. Cluster		
M20	Sagittarius	Map 10	Trifid Nebula	Emmi. Nebula	2,200	
M21	Sagittarius	Map 10		Open Cluster	3,000	
M22	Sagittarius	Map 10		Glob. Cluster	10,000	70,000 Stars
M23	Sagittarius	Map 10, 12		Open Cluster	4,500	
M24	Sagittarius	Map 10		Star Cloud		
M25	Sagittarius	Map 10		Open Cluster		
M26	Scutum	Map 10		Glob. Cluster	5,000	
M27	Vupecula	Map 8	Dumbell Nebula	Planatary Neb.	1,250	
M28	Sagittarius	Map 10		Glob. Cluster	15,000	
M29	Cygnus	Map 8		Open Cluster	7,200	
M30	Capricornus	Map 11		Glob. Cluster		
M31	Andromeda	Map 3	Andromeda Galaxy	G-Spiral	2.2 mil	160 mil suns
M32	Andromeda	Map 3	Andromeda Comp.	G-Elliptical		
M33	Triangulum	Map 3		G-Spiral		
M34	Perseus	Map 3		Open Cluster		
M35	Gemini	Map 2		Open Cluster	2,800	
M36	Auriga	Map 1		Open Cluster	4,100	
M37	Auriga	Map 1		Open Cluster	4,600	
M38	Auriga	Map 1		Open Cluster	4,200	
M39	Cygnus	Map 8, 3		Open Cluster		
M40	Ursa Major	Map 5		Two Stars		
M41	Canis Major	Map 2		Open Cluster	2,400	
M42	Orion	Map 2		Emmi Nebula	1,000	
M43	Orion	Map 2		Emmi Nebula	1,000	
M44	Sagittarius	Map 2	Beehive Cluster	Open Cluster	500	40 Stars
M45	Taurus	Map 1	Pleiades	Open Cluster	400	
M46	Puppis	Map 2		Open Cluster		
M47	Puppis	Map 2		Open Cluster		
M48	Hydra	Map 2		Open Cluster		
M49	Virgo	Map 7		G-Elliptical		
M50	Monoceros	Map 2		Open Cluster		
M51	Canes Venatici	Map 5	Whirlpool Galaxy	G-Spiral	15 mil	
M52	Cassiopeia	Map 3		Open Cluster		
M53	Coma Berenices	Map 6, 7		Glob. Cluster		
M54	Sagittarius	Map 10		Glob. Cluster	50,000	
M55	Sagittarius	Map 10		Glob. Cluster	20,000	
M56	Lyra	Map 8		Glob. Cluster	40,000	
M57	Lyra	Map 8, 9	Ring Nebula	Planatary Neb.	4,100	

Map and Constallation Key to Messier Objects for TELRAD Finders

Messier Object	Constallation	Telrad Map #'s	Common Name	Type	Distance Light Years	Other Data
M58	Virgo	Map 7		G-Spiral		
M59	Virgo	Map 7		G-Elliptical		
M60	Virgo	Map 7		G-Elliptical		
M61	Virgo	Map 7, 14	Blackeye Galaxy	G-Spiral		
M62	Ophiuchus	Map 13		Glob. Cluster		
M63	Canes Venatici	Map 5, 6	Sunflower Galaxy	G-Spiral		
M64	Coma Berenices	Map 6, 7		G-Spiral		
M65	Leo	Map 4, 7		G-Spiral	35 mil	
M66	Leo	Map 4		G-Spiral		
M67	Cancer	Map 2		Open Cluster		
M68	Hydra	Map 14		Glob. Cluster		
M69	Sagittarius	Map 10		Glob. Cluster		
M70	Sagittarius	Map 10		Glob. Cluster	65,000	
M71	Sagittarius	Map 8		Glob. Cluster	8,500	One of nearest
M72	Aquarius	Map 11		Glob. Cluster		
M73	Aquarius	Map 11		Open Cluster		
M74	Pisces	Map 3		G-Spiral		
M75	Sagittarius	Map 11		Glob. Cluster		
M76	Perseus	Map 3	Little Dumbell	Planetary Neb.	3,400	
M77	Cetus	Map 15		G-Spiral		
M78	Orion	Map 2		Refle. Nebula		
M79	Lepus	Map 2		Glob. Cluster	54,000	
M80	Scorpius	Map 13		Glob. Cluster		
M81	Ursa Major	Map 5		G-Spiral	7 mil	
M82	Ursa Major	Map 5	Exploding Galaxy	G-Irregular		
M83	Hydra	Map 14		G-Spiral		
M84	Virgo	Map 7		G-Elliptical		
M85	Coma Berenices	Map 7		G-Spiral		
M86	Virgo	Map 7		G-Elliptical		
M87	Virgo	Map 7		G-Elliptical		
M88	Coma Berenices	Map 7		G-Spiral		
M89		Map 7		G-Elliptical		
M90	Virgo	Map 7		G-Spiral		
M91	Virgo	Map 7		G-Spiral		
M92	Hercules	Map 9		Glob. Cluster	28,000	
M93	Puppis	Map 2		Open Cluster		
M94	Canes Venatici	Map 5, 6		G-Spiral		
M95	Leo	Map 4		G-Spiral		
M96	Leo	Map 4		G-Spiral		
M97	Ursa Major	Map 5	Owl Nebula	Planetary Neb.	2,600	
M98	Coma Berenices	Map 7		G-Spiral		
M99	Coma Berenices	Map 7		G-Spiral		
M100	Coma Berenices	Map 7		G-Spiral		
M101	Ursa Major	Map 5		G-Spiral	15 mil	
M102	Draco	Map 5		G-Spiral	15 mil	
M103	Cassiopeia	Map 3		Open Cluster	8,000	
M104	Virgo	Map 14	Sombrero Galaxy	G-Spiral		
M105	Leo	Map 4		G-Elliptical		
M106	Canes Venatici	Map 5		G-Spiral		
M107	Ophiuchus	Map 12, 13		Glob. Cluster		
M108	Ursa Major	Map 5		G-Spiral	25 mil	
M109	Ursa Major	Map 5		G-Spiral		
M110	Andromeda	Map 3	Andromeda Comp.	G-Elliptical		

MAP 1
AURIGA, Taurus
M1, M35, M36, M37, M38, M45



STARS

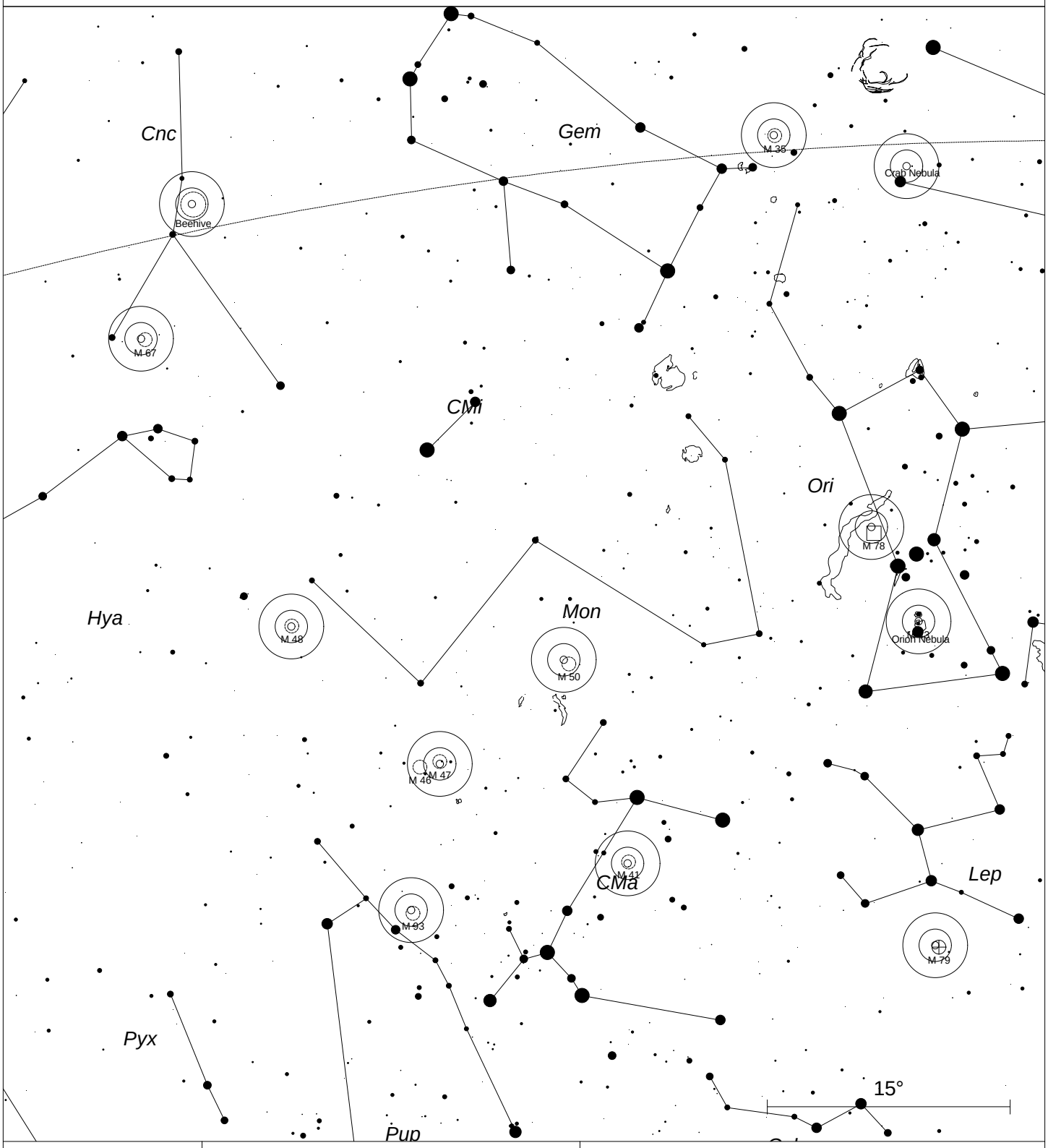
●	<2	•	4.5
●	2.5	•	5
●	3	·	5.5
●	3.5		>6
•	4		

SYMBOLS

Comet		Globular Cluster	
Asteroid		Planetary Nebula	
Galaxy		Quasar	
Open Cluster		Other Object	
Bright Nebula			

Chart created using Sky Map 3.0
www.skymap.com
Chris Marriott, John Small

MAP 2
CANNIS MAJOR, MONOCEROS, Cancer, Gemini, Orion, Lepus
M1, M35, M41, M42, M43, M44, M45, M46, M47, M48, M50, M67, M78, M79, M93



STARS

●	<2	•	4.5
●	2.5	•	5
●	3	·	5.5
●	3.5		>6
•	4		

SYMBOLS

	Comet	⊕	Globular Cluster
	Asteroid	⊕	Planetary Nebula
⬭	Galaxy	⊘	Quasar
○	Open Cluster	○	Other Object
□	Bright Nebula		

Chart created using Sky Map 3.0
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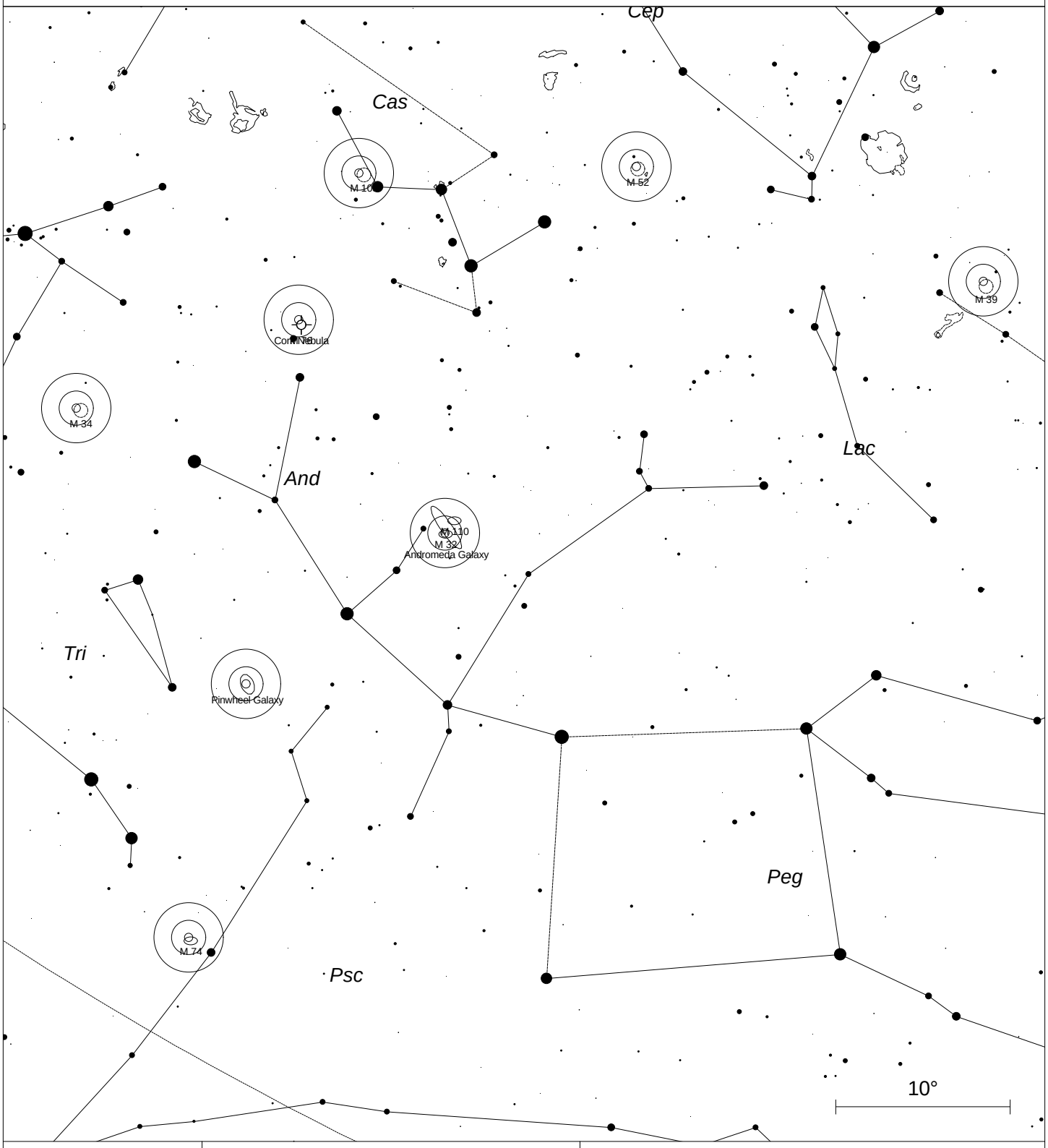
MAP 3
ANDROMEDA, TRANGULUM, LACERTA, Cassiopeia, Pegasus, Pisces
M31, M32, M33, M34, M39, M52, M74, M76, M103, M110



STARS

●	<2	•	4.5
●	2.5	·	5
●	3	·	5.5
●	3.5		>6
•	4		

SYMBOLS

Comet		Globular Cluster	
Asteroid		Planetary Nebula	
Galaxy		Quasar	
Open Cluster		Other Object	
Bright Nebula			

Chart created using Sky Map 3.0
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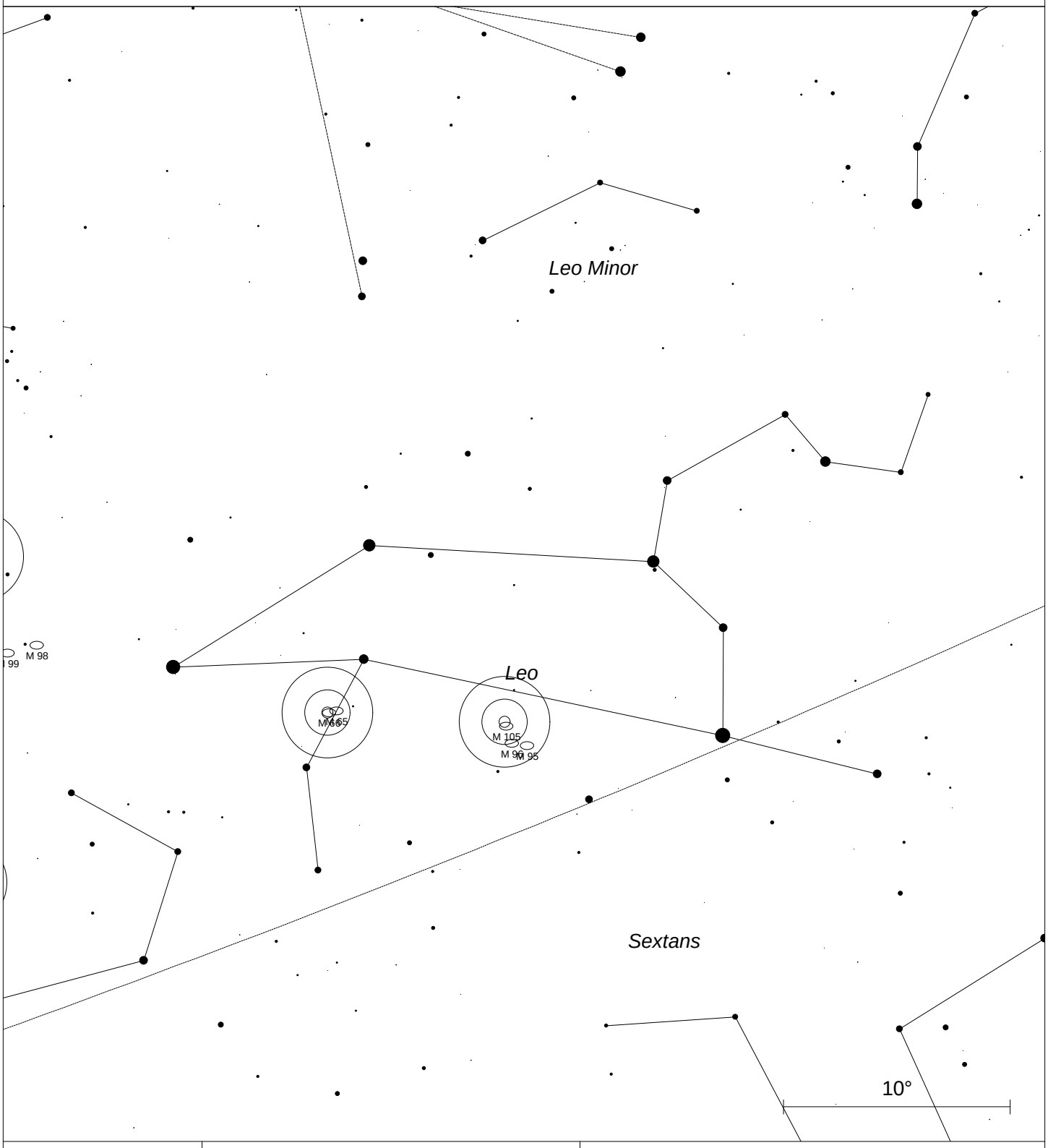
MAP 4
LEO, LEO MINOR
M65, M66, M95, M96, M105



STARS

●	<2	•	4.5
●	2.5	•	5
●	3	·	5.5
●	3.5	·	>6
•	4		

SYMBOLS

Comet		Globular Cluster	
Asteroid		Planetary Nebula	
Galaxy		Quasar	
Open Cluster		Other Object	
Bright Nebula			

Chart created using Sky Map 3.0
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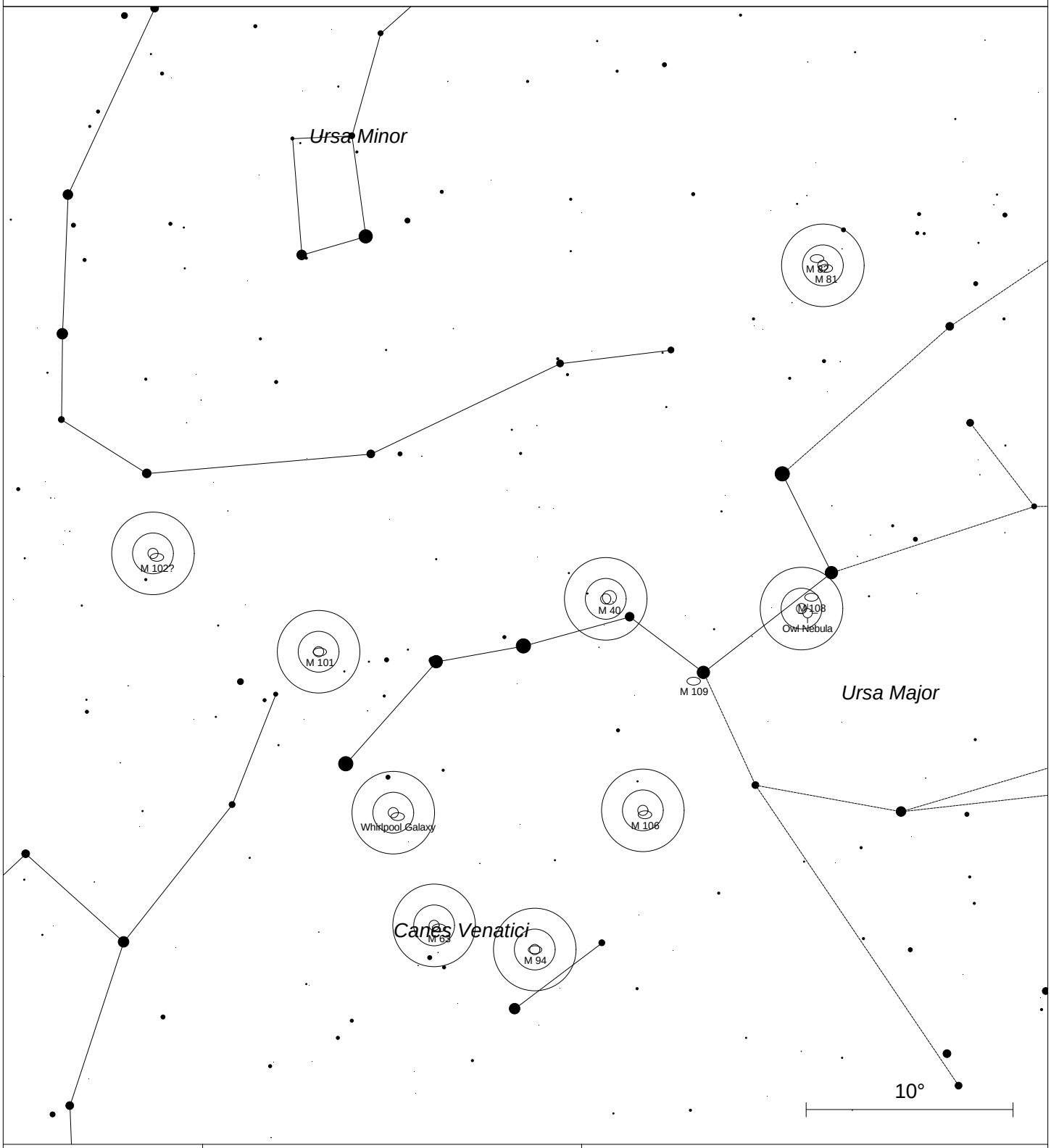
MAP 5
CANES VENATICI, Ursa Major
M40, M51, M63, M81, M82, M94, M97, M101, M102, M108, M109,



STARS

●	<2	•	4.5
●	2.5	•	5
●	3	·	5.5
●	3.5		>6
•	4		

SYMBOLS

	Comet	⊕	Globular Cluster
	Asteroid	⊹	Planetary Nebula
⬭	Galaxy	⊘	Quasar
○	Open Cluster	○	Other Object
□	Bright Nebula		

Chart created using Sky Map 3.0
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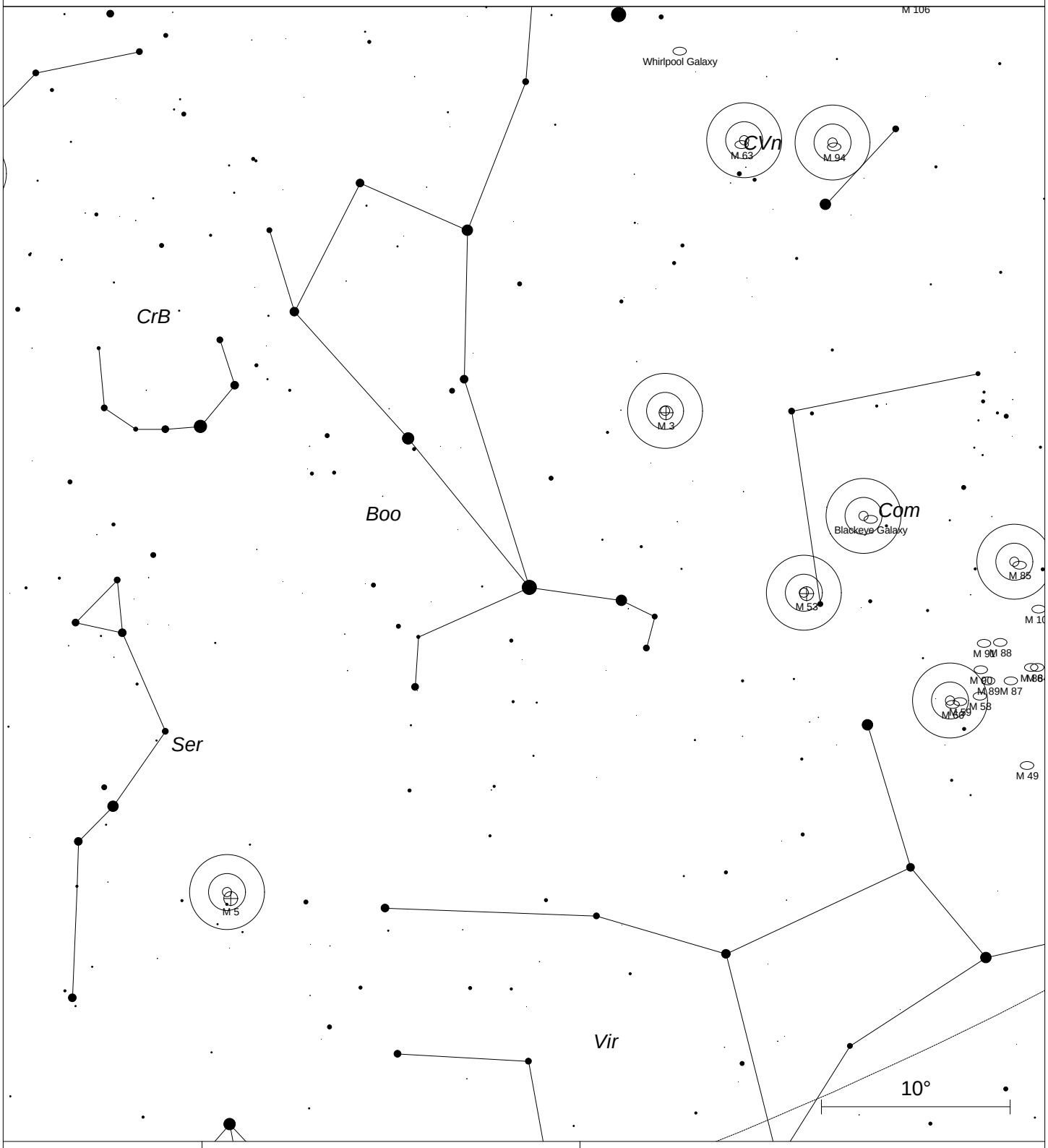
MAP 6
SERPENS, COMA BERNICES, CANES VENATICI, Bootes
M3, M5, M53, M63, M64, M94



STARS		SYMBOLS	
<2	4.5	Comet	Globular Cluster
2.5	5	Asteroid	Planetary Nebula
3	5.5	Galaxy	Quasar
3.5	>6	Open Cluster	Other Object
4		Bright Nebula	

Chart created using Sky Map 3.0
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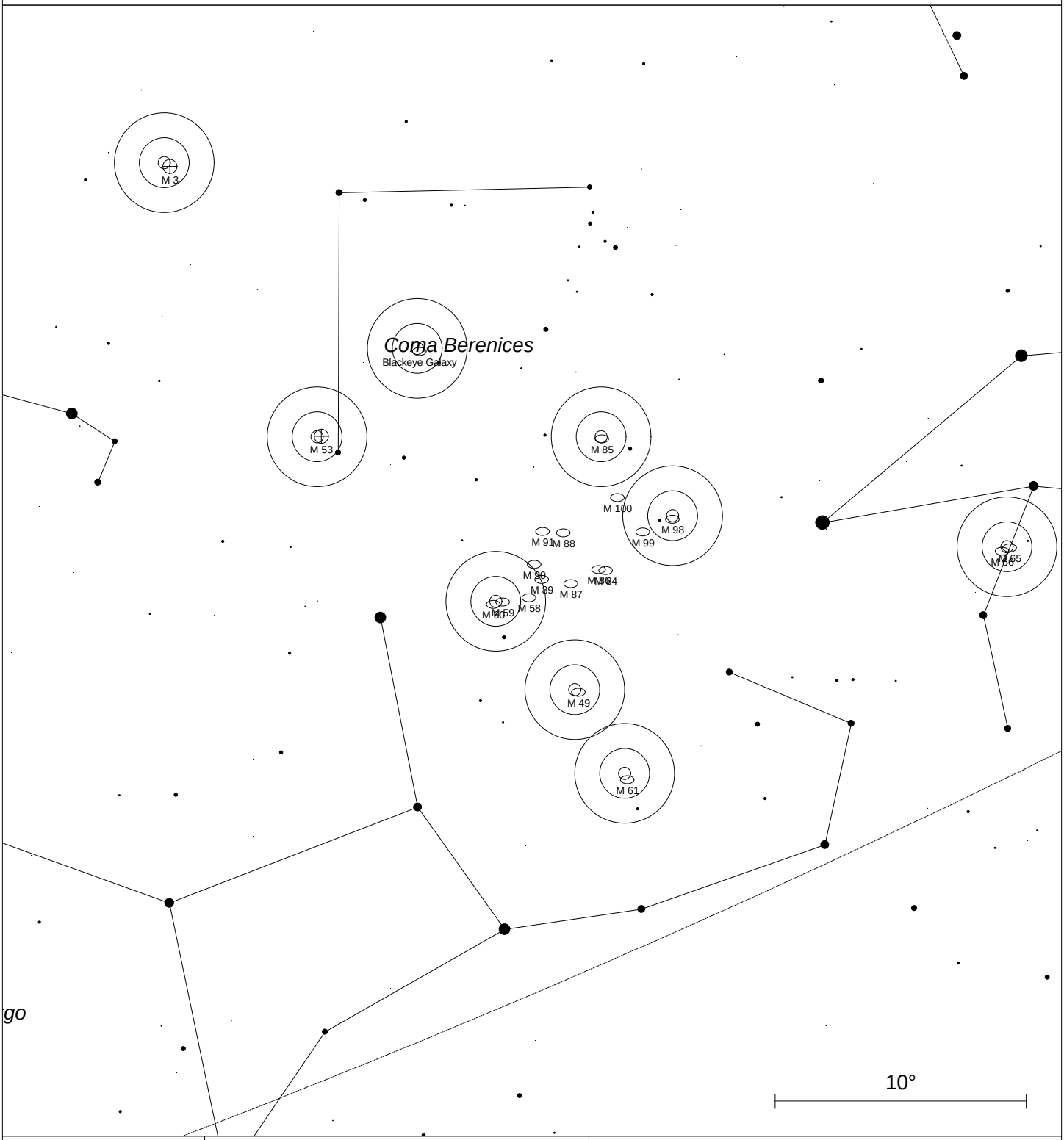
MAP 7
COMA BERENICES, Virgo, Leo (Virgo Cluster of Galaxies)
M3, M49, M53, M58, M59, M60, M61, M64, M65, M66
M84, M86, M87, M88, M90, M91, M98, M99, M100



STARS
- <2
- 2.5
- 3
- 3.5
- 4
- 4.5
- 5
- 5.5
- >6

SYMBOLS
- Comet
- Asteroid
- Galaxy
- Open Cluster
- Bright Nebula
- Globular Cluster
- Planetary Nebula
- Quasar
- Other Object

Chart created using Sky Map 3.0
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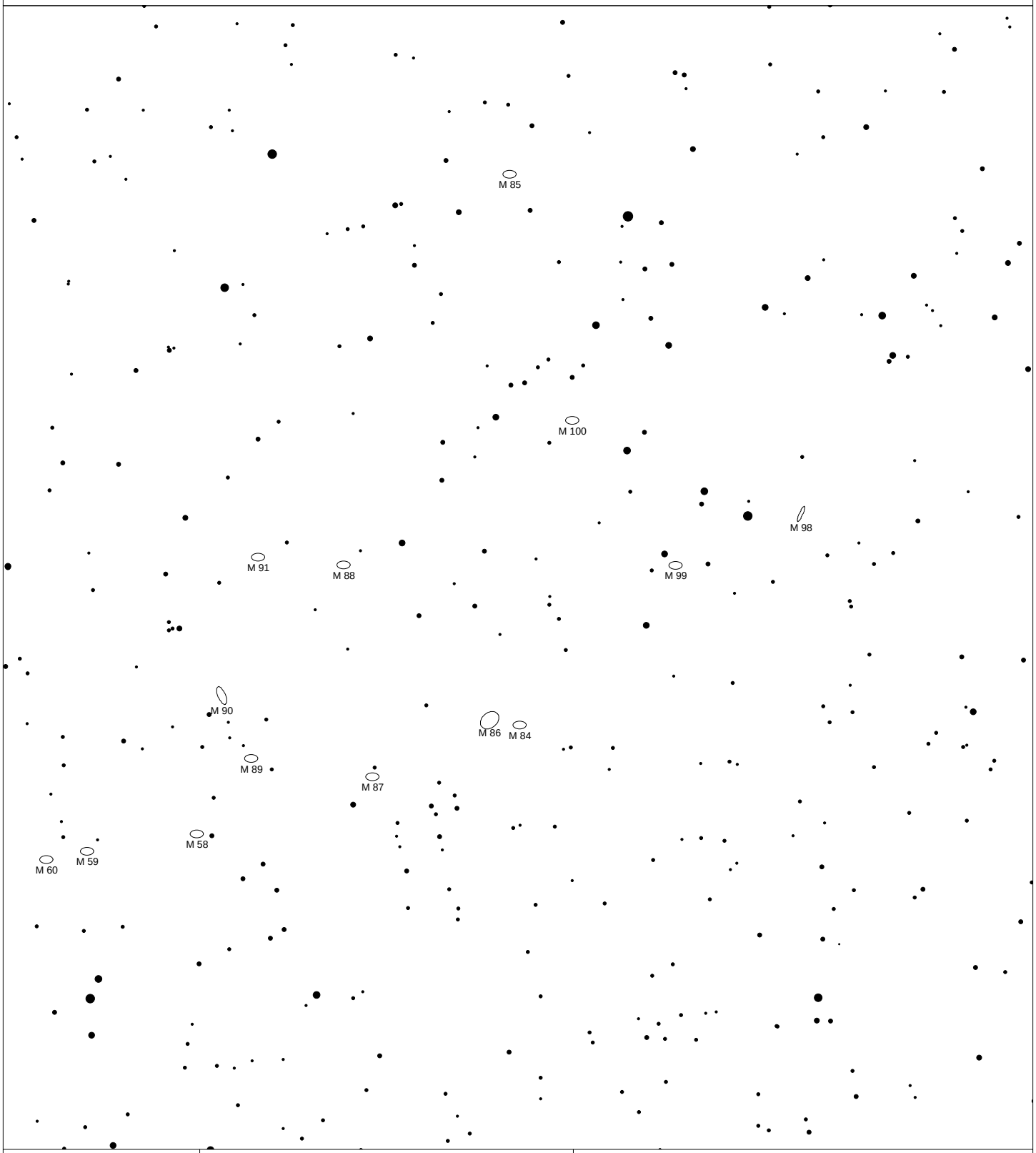
Zoom in View of Virgo Clusters



STARS

<2	7
3	8
4	9
5	10
6	>11

SYMBOLS

Comet	Globular Cluster
Asteroid	Planetary Nebula
Galaxy	Quasar
Open Cluster	Other Object
Bright Nebula	

Chart created using Sky Map 3.0
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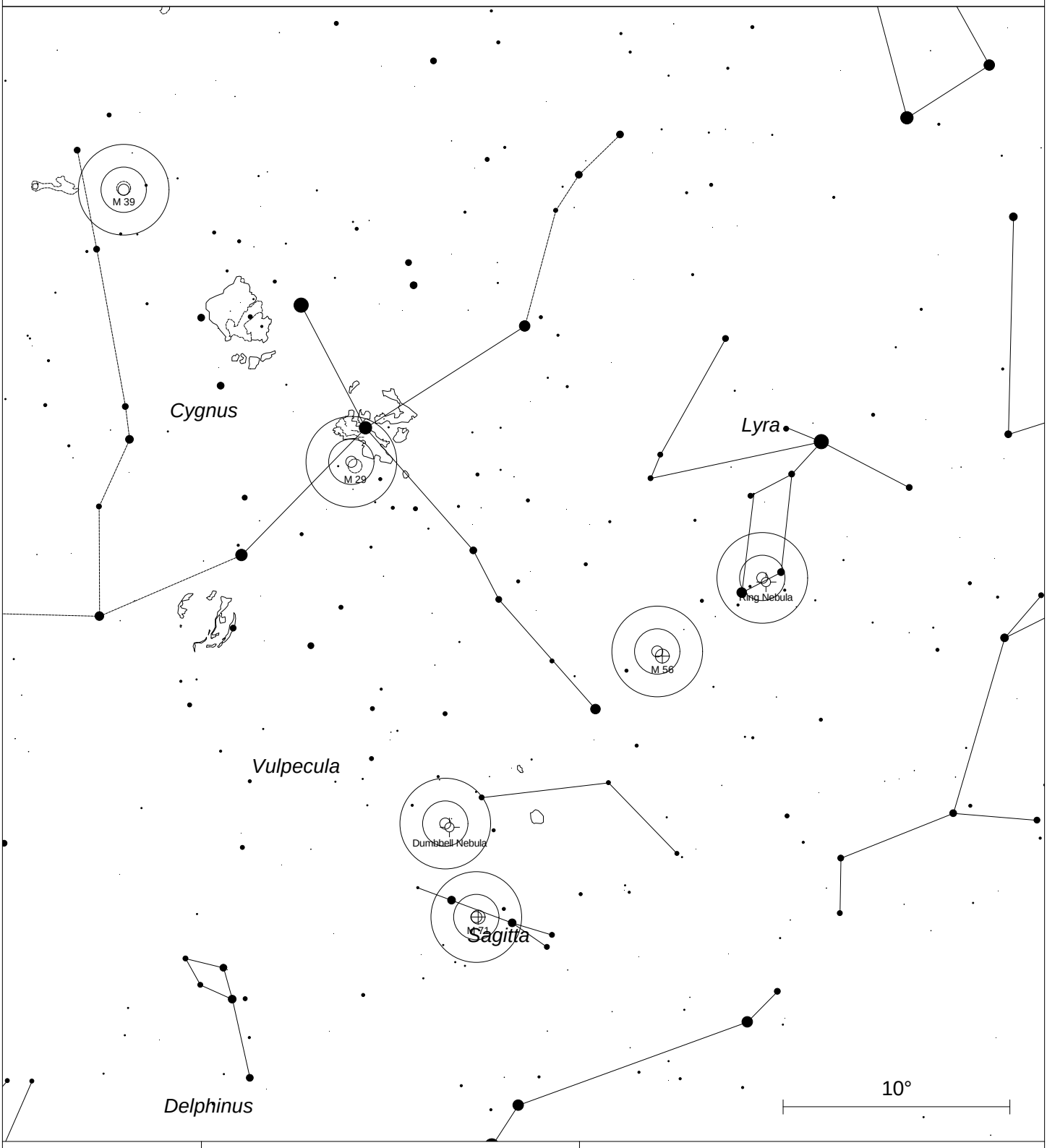
MAP8
LYRA, SAGITTA, VULPECULA, Cygnus
M27, M29, M38, M56, M57, M71



STARS

●	<2	•	4.5
●	2.5	•	5
●	3	·	5.5
●	3.5		>6
•	4		

SYMBOLS

Comet		Globular Cluster	
Asteroid		Planetary Nebula	
Galaxy		Quasar	
Open Cluster		Other Object	
Bright Nebula			

Chart created using Sky Map 3.0
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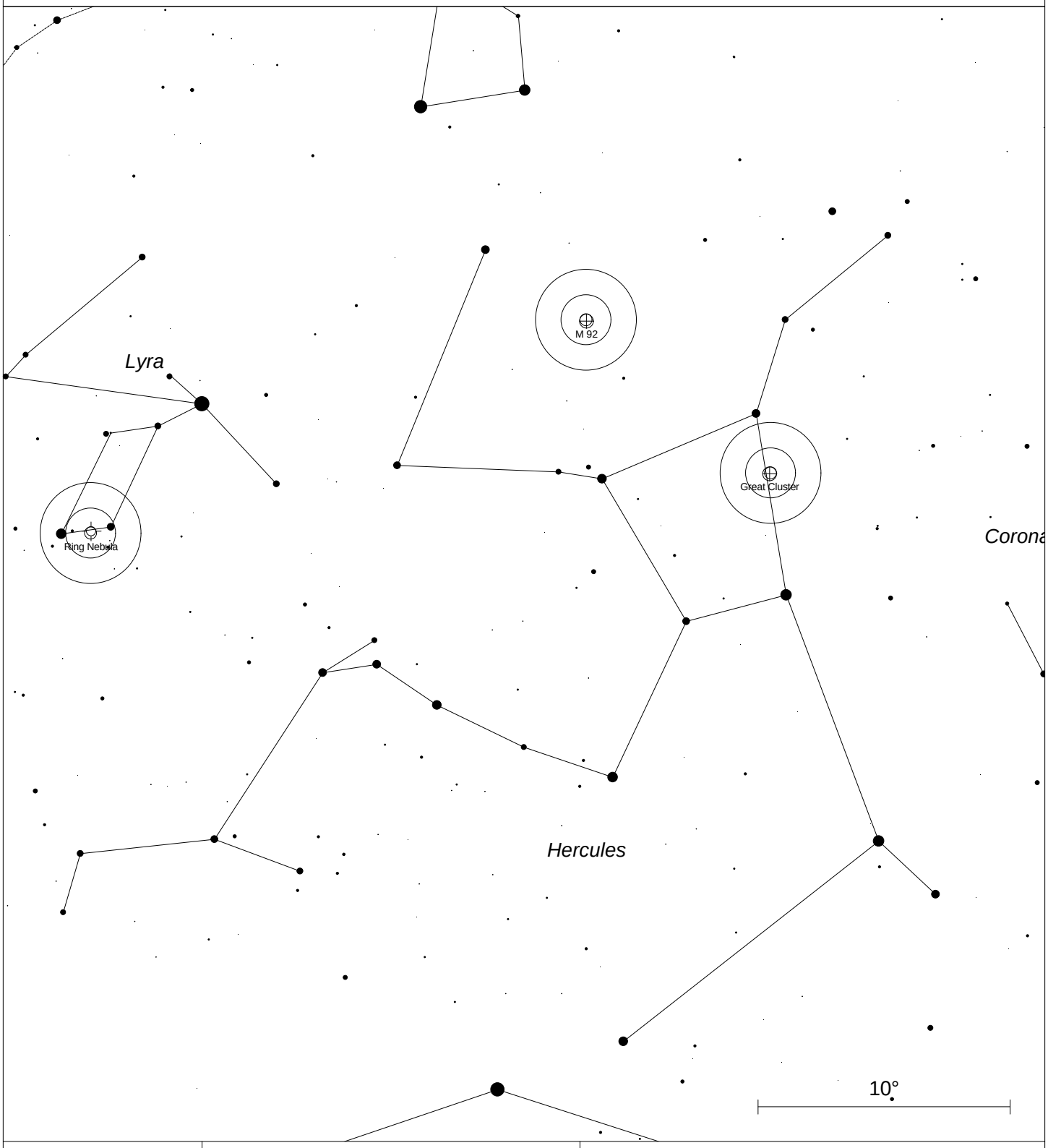
MAP9
HERCULES, LYRA
M13, M57, M92



STARS

●	<2	•	4.5
●	2.5	•	5
●	3	·	5.5
●	3.5		>6
•	4		

SYMBOLS

	Comet	⊕	Globular Cluster
	Asteroid	⊹	Planetary Nebula
⬭	Galaxy	⊘	Quasar
○	Open Cluster	○	Other Object
□	Bright Nebula		

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