

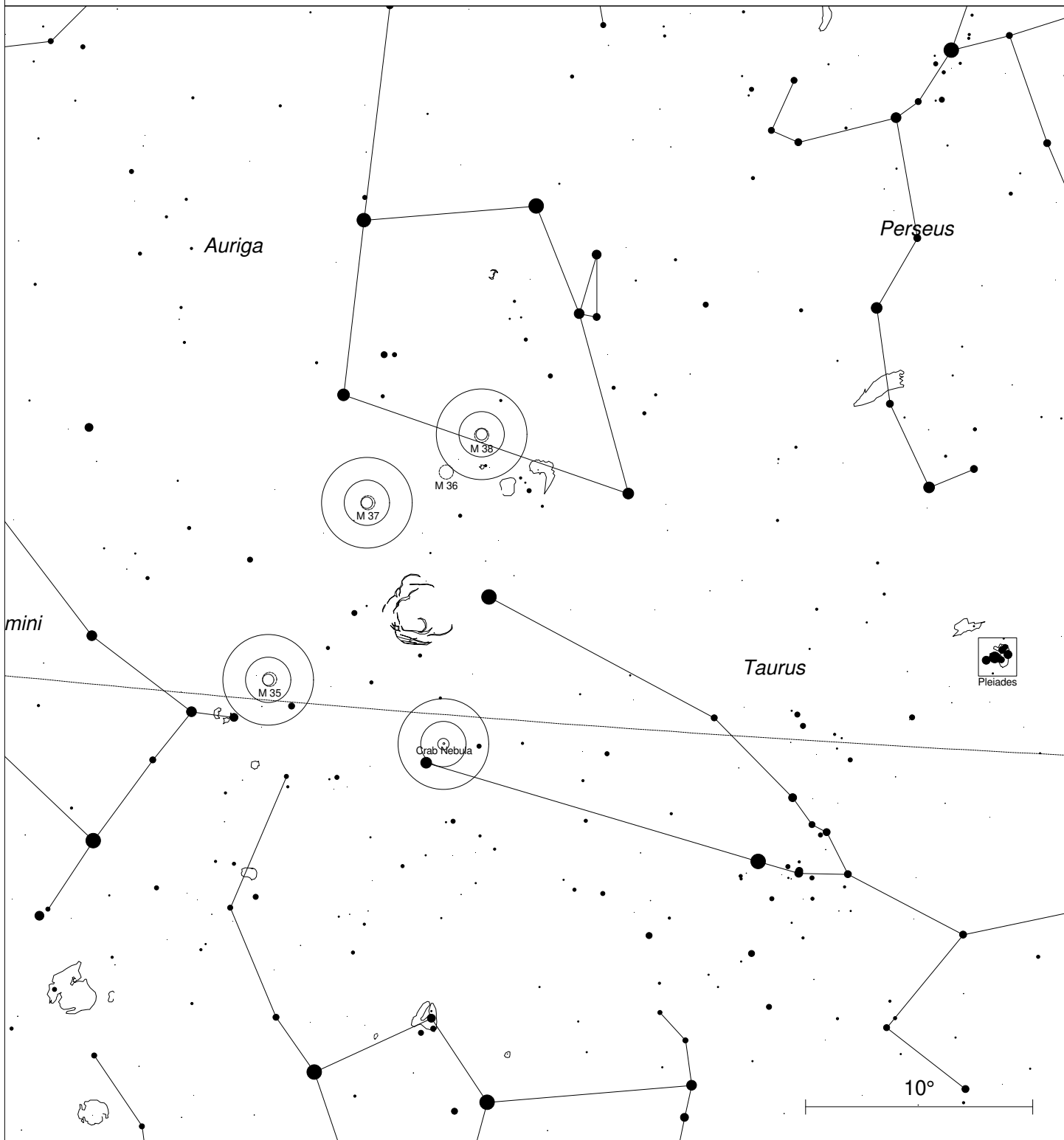
## Map and Constallation Key to Messier Objects for TELRAD Finders

| 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             | Canes 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    | Planetary 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       | Planetary 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**



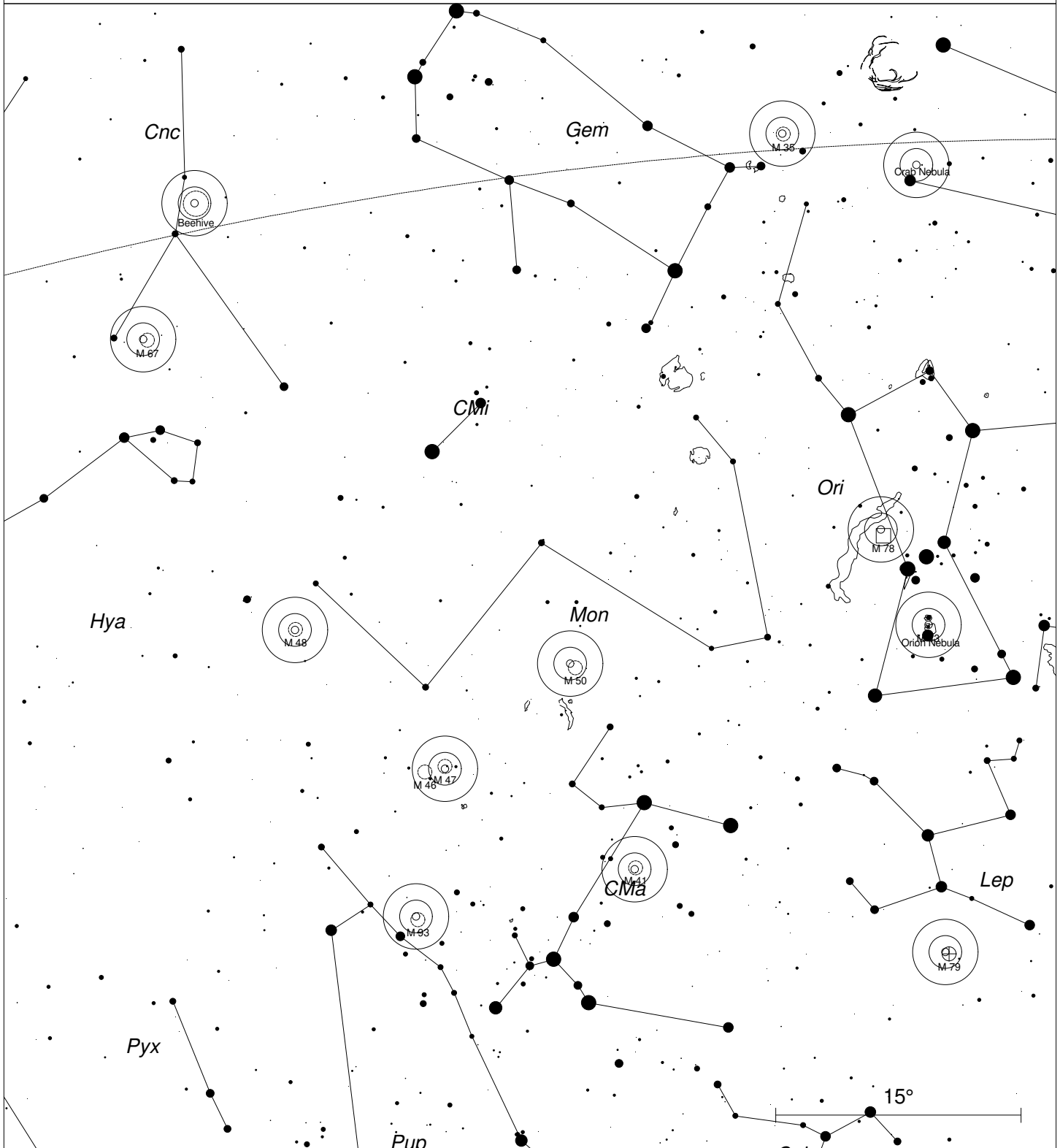
**STARS**

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

**SYMBOLS**

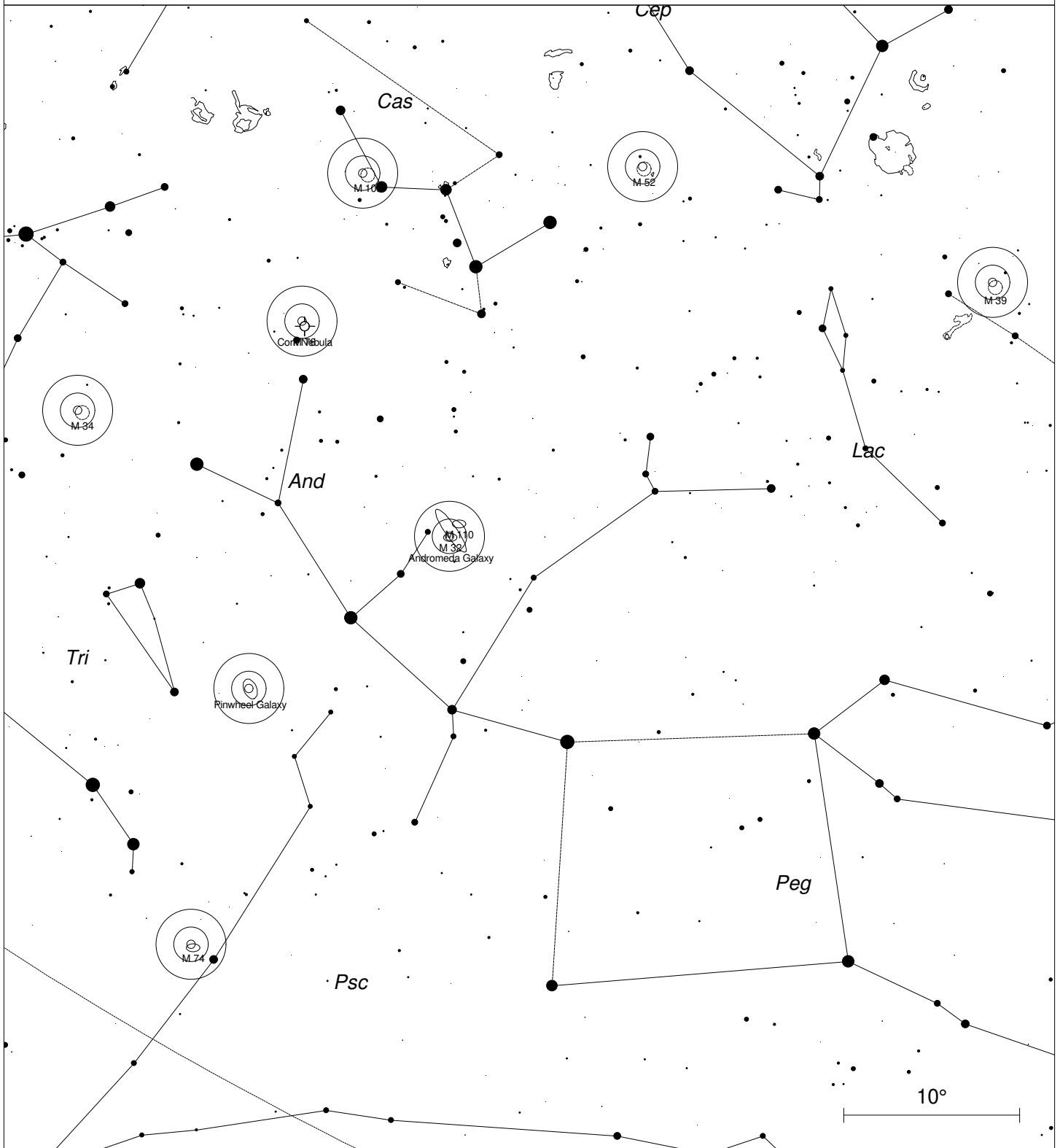
- ☄ Comet
- ♁ Asteroid
- ☾ Galaxy
- Open Cluster
- ◻ Bright Nebula
- ⊕ Globular Cluster
- ⊕ Planetary Nebula
- ⊕ Quasar
- Other Object

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



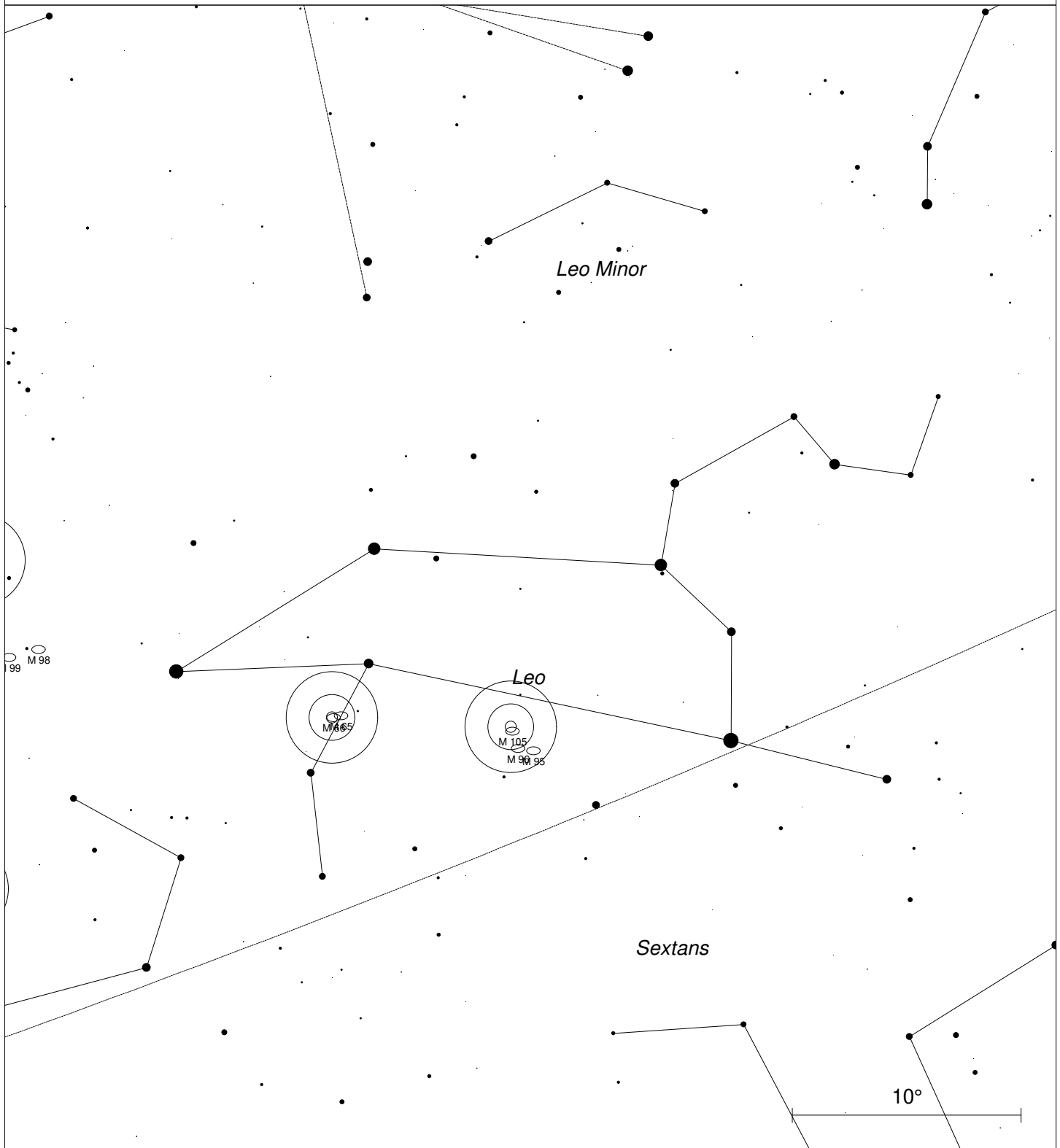
| STARS |       | SYMBOLS         |                    |
|-------|-------|-----------------|--------------------|
| ● <2  | • 4.5 | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5 | • 5   | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3   | • 5.5 | ○ Galaxy        | ⊕ Quasar           |
| ● 3.5 | • >6  | ○ Open Cluster  | ○ Other Object     |
| ● 4   |       | □ Bright Nebula |                    |

**MAP 3**  
**ANDROMEDA, TRINGULUM, LACERTA, Cassiopeia, Pegasus, Pisces**  
**M31, M32, M33, M34, M39, M52, M74, M76, M103, M110**



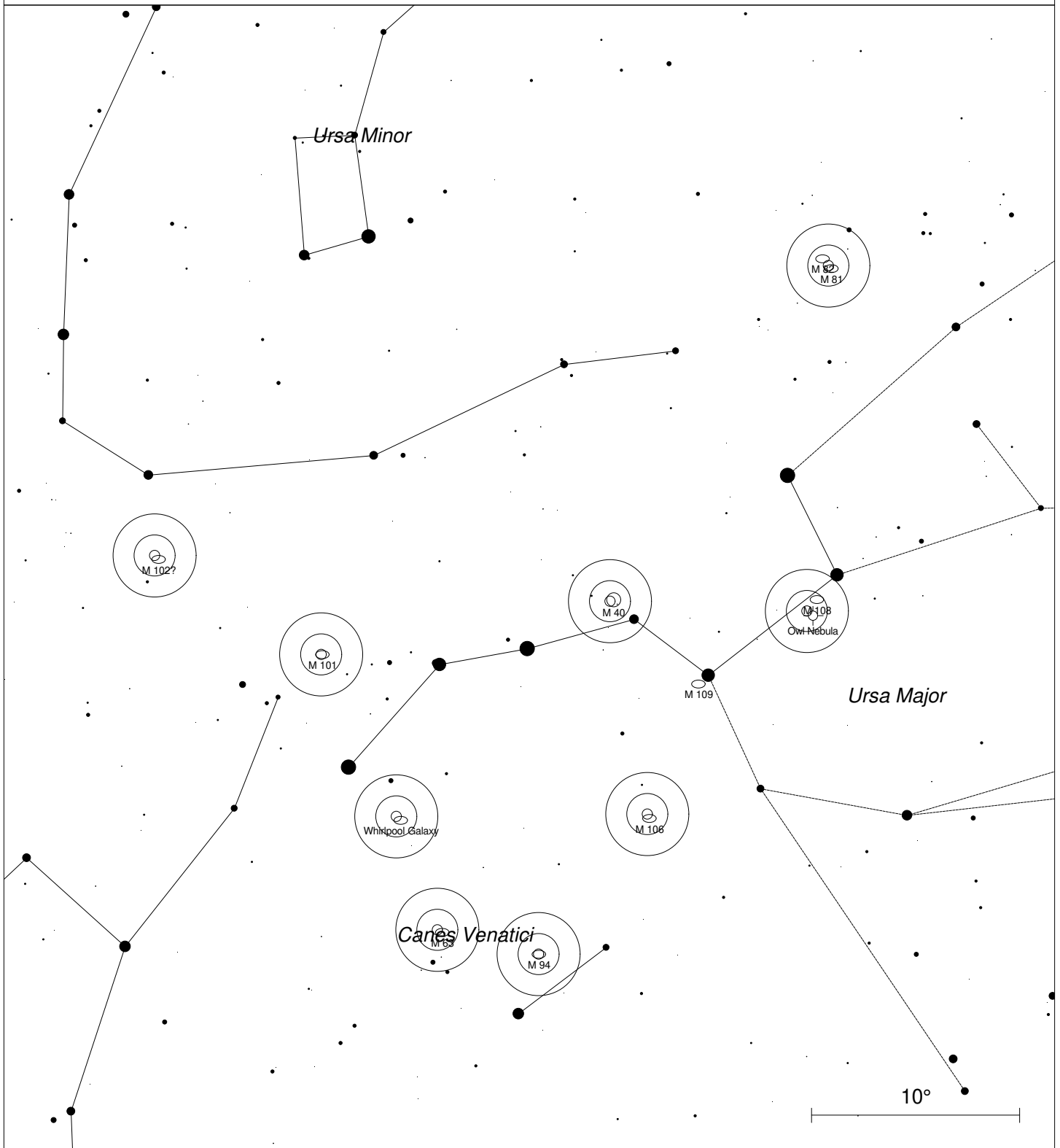
| STARS |       | SYMBOLS         |                    |
|-------|-------|-----------------|--------------------|
| ● <2  | • 4.5 | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5 | • 5   | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3   | • 5.5 | ○ Galaxy        | ⊕ Quasar           |
| ● 3.5 | • >6  | ○ Open Cluster  | ○ Other Object     |
| ● 4   |       | □ Bright Nebula |                    |

**MAP 4**  
**LEO, LEO MINOR**  
**M65, M66, M95, M96, M105**



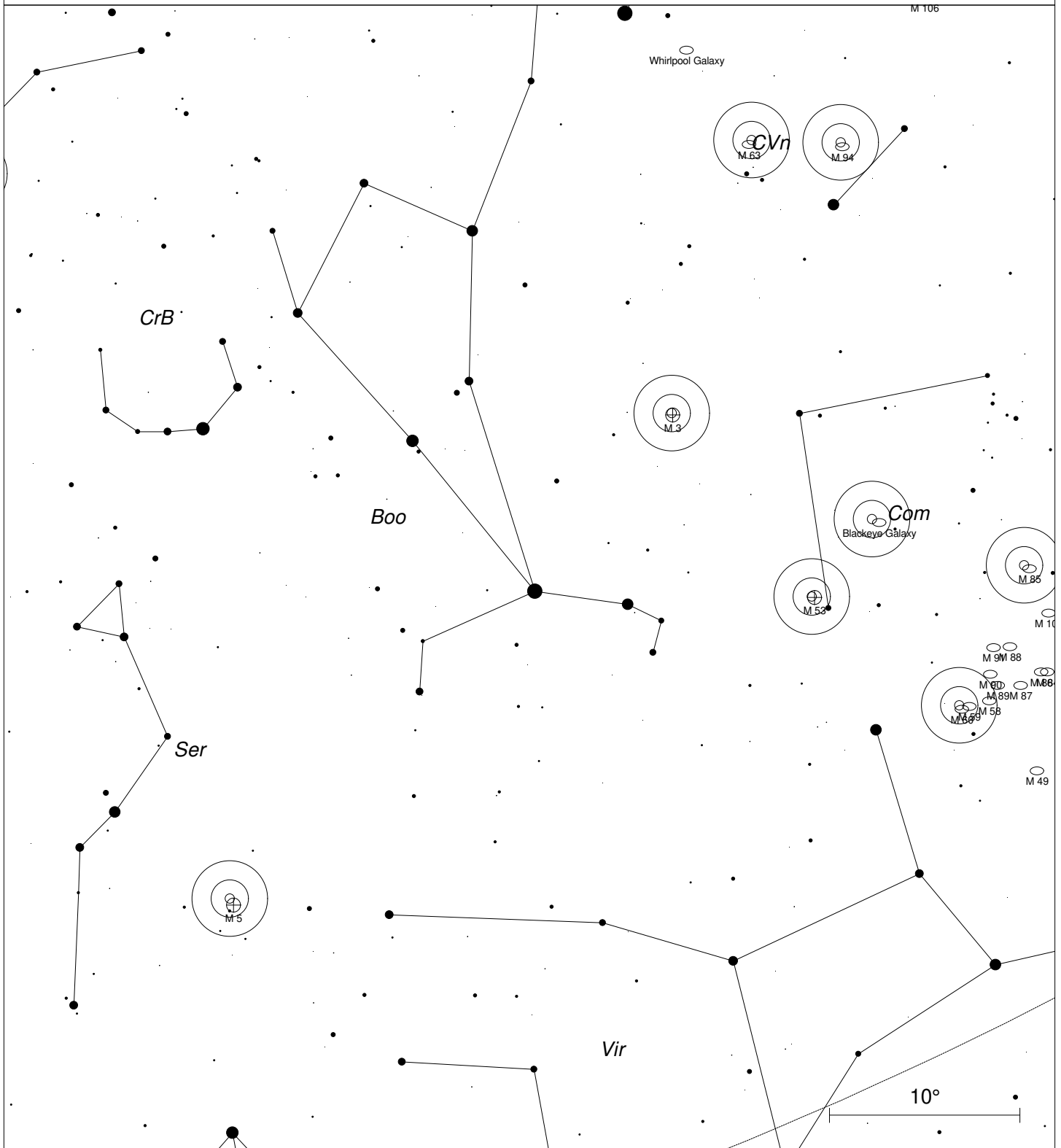
| STARS |       | SYMBOLS         |                    |
|-------|-------|-----------------|--------------------|
| ● <2  | • 4.5 | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5 | • 5   | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3   | • 5.5 | ○ Galaxy        | ☉ Quasar           |
| ● 3.5 | • >6  | ○ Open Cluster  | ○ Other Object     |
| ● 4   |       | □ Bright Nebula |                    |

**MAP 5**  
**CANES VENATICI, Ursa Major**  
**M40, M51, M63, M81, M82, M94, M97, M101, M102, M108, M109,**



| STARS             |       | SYMBOLS         |                    |
|-------------------|-------|-----------------|--------------------|
| ● <math><2</math> | ● 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 |                    |

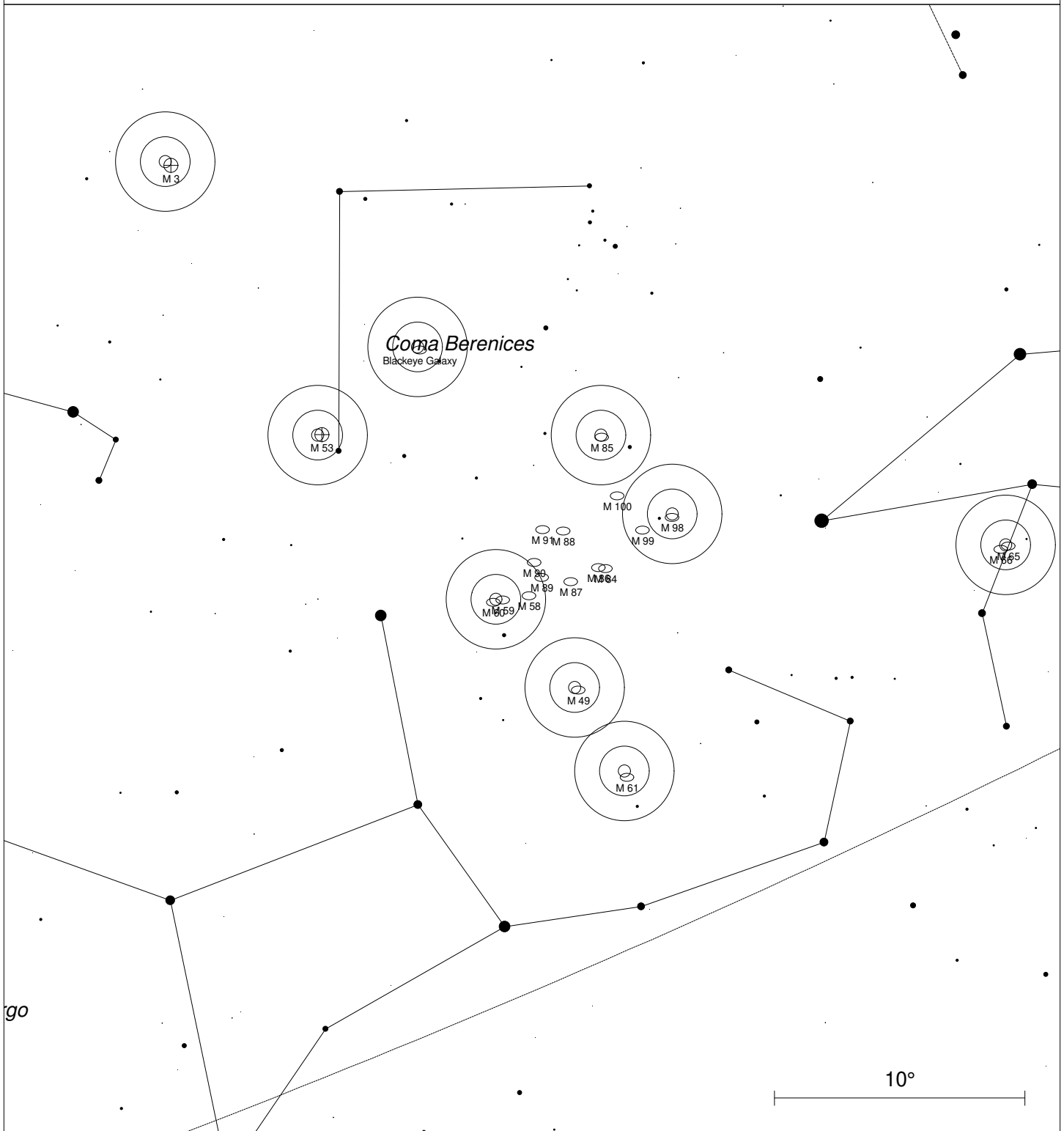
**MAP 6**  
**SERPENS, COMA BERNICES, CANES VENATICI, Bootes**  
**M3, M5, M53, M63, M64, M94**



| STARS | SYMBOLS         |                    |
|-------|-----------------|--------------------|
| ● <2  | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5 | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3   | ○ Galaxy        | ⊗ Quasar           |
| ● 3.5 | ○ Open Cluster  | ○ Other Object     |
| ● 4   | □ Bright Nebula |                    |
| ● 4.5 |                 |                    |
| ● 5   |                 |                    |
| ● 5.5 |                 |                    |
| ● >6  |                 |                    |

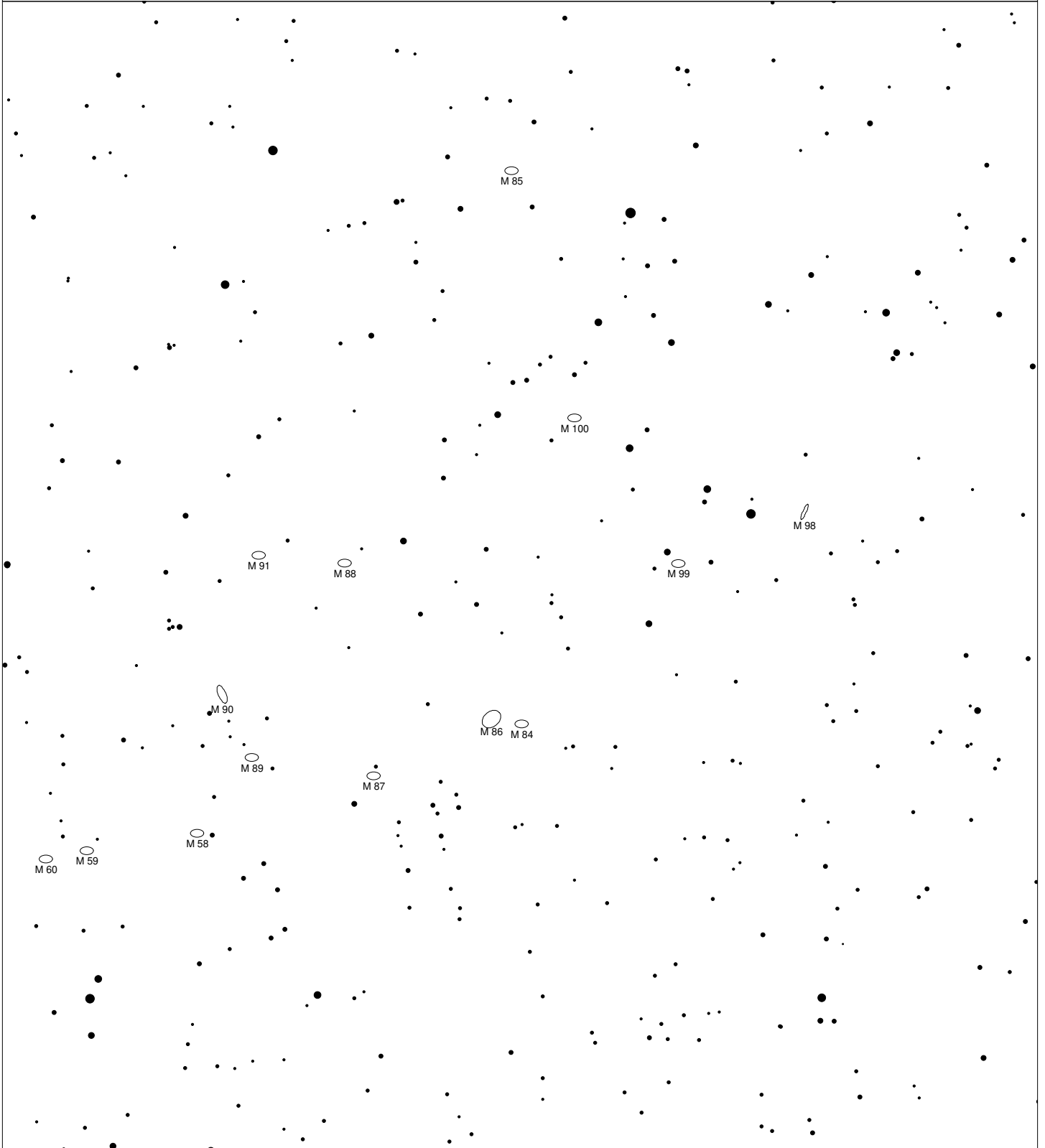


**MAP 7**  
**COMA BERENICES, Virgo, Leo (Virgo Cluster of Galaxies)**  
**M3, M49, M53, M58, M59, M60, M61, M64, M65, M66**  
**M84, M86, M87, M88, M90, M91, M98, M99, M100**



| STARS |       | 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 |                    |

## Zoom in View of Virgo Clusters



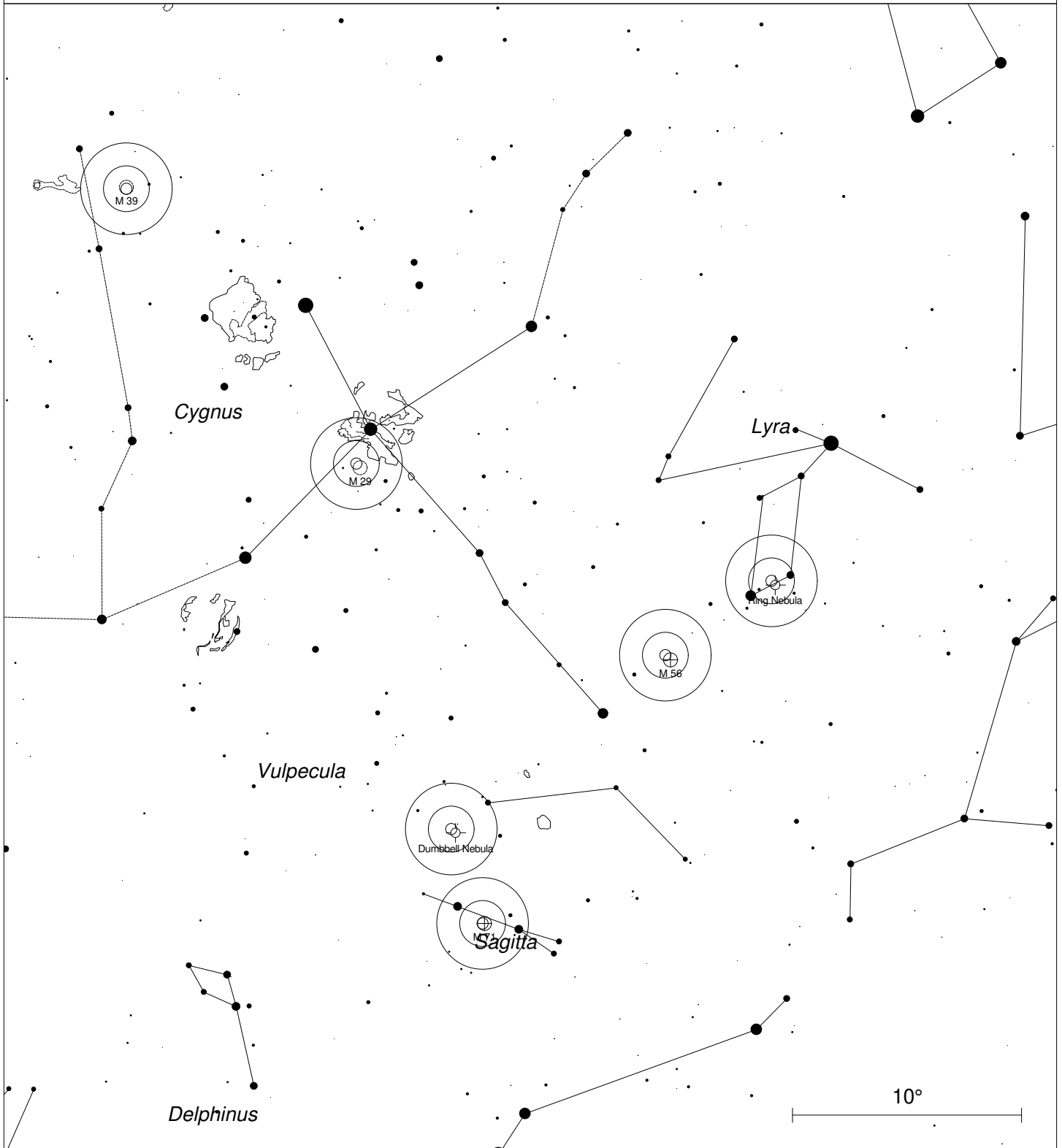
### STARS

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

### SYMBOLS

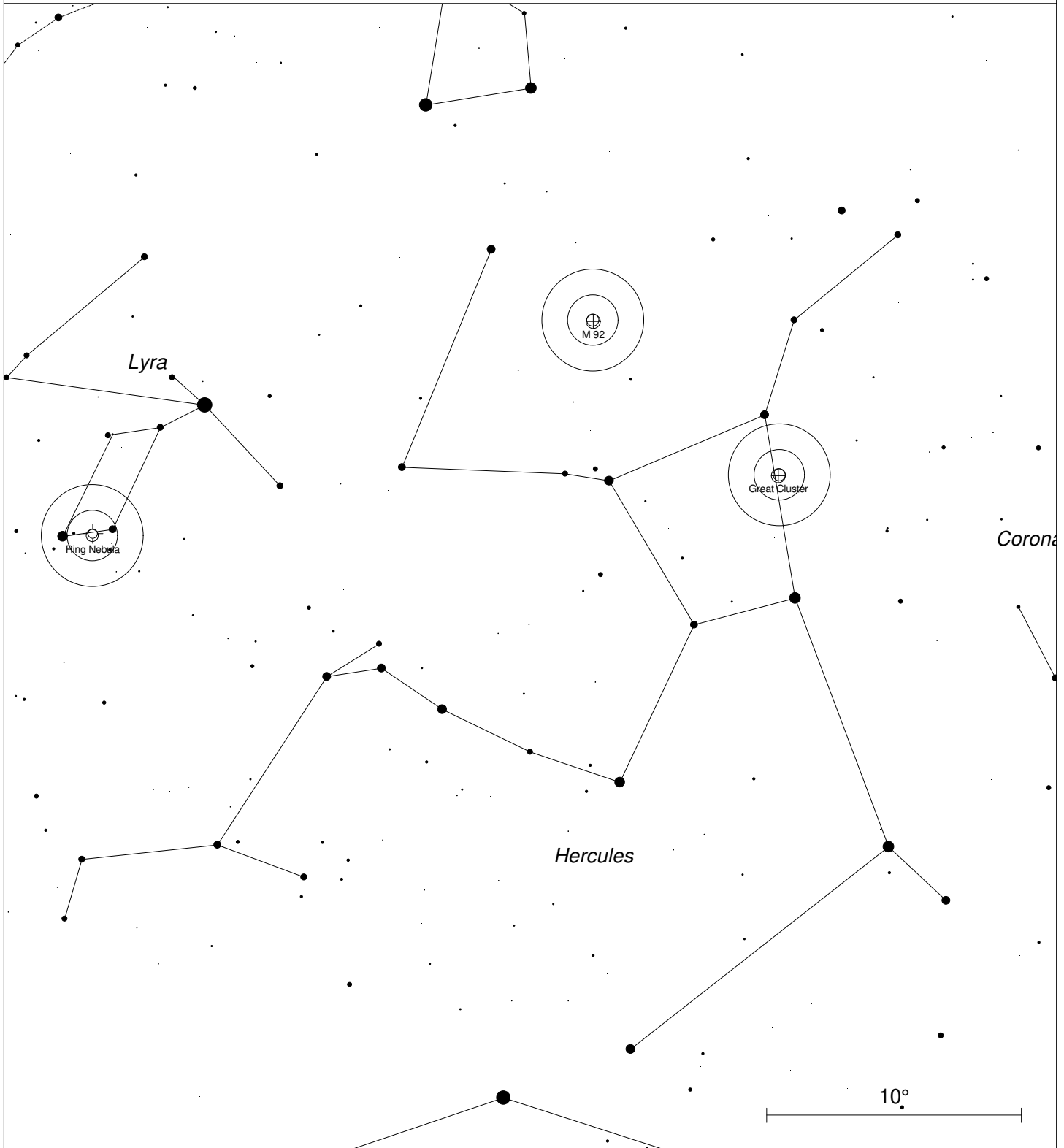
- |               |                  |
|---------------|------------------|
| Comet         | Globular Cluster |
| Asteroid      | Planetary Nebula |
| Galaxy        | Quasar           |
| Open Cluster  | Other Object     |
| Bright Nebula |                  |

**MAP8**  
**LYRA, SAGITTA, VULPECULA, Cygnus**  
**M27, M29, M38, M56, M57, M71**



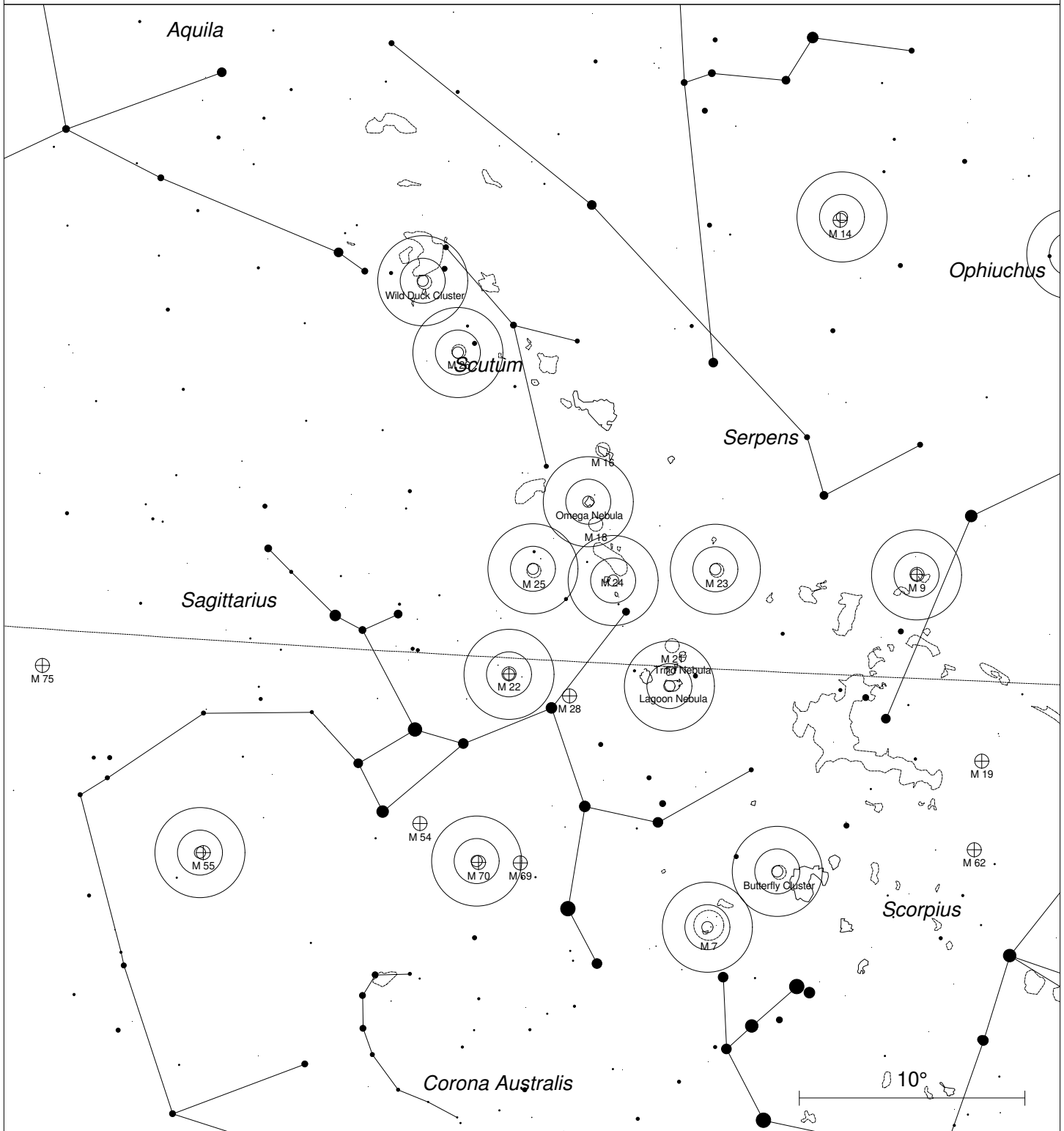
| STARS |       | SYMBOLS         |                    |
|-------|-------|-----------------|--------------------|
| ● <2  | • 4.5 | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5 | • 5   | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3   | • 5.5 | ☾ Galaxy        | ⊕ Quasar           |
| ● 3.5 | • >6  | ○ Open Cluster  | ○ Other Object     |
| ● 4   |       | □ Bright Nebula |                    |

**MAP9**  
**HERCULES, LYRA**  
**M13, M57, M92**



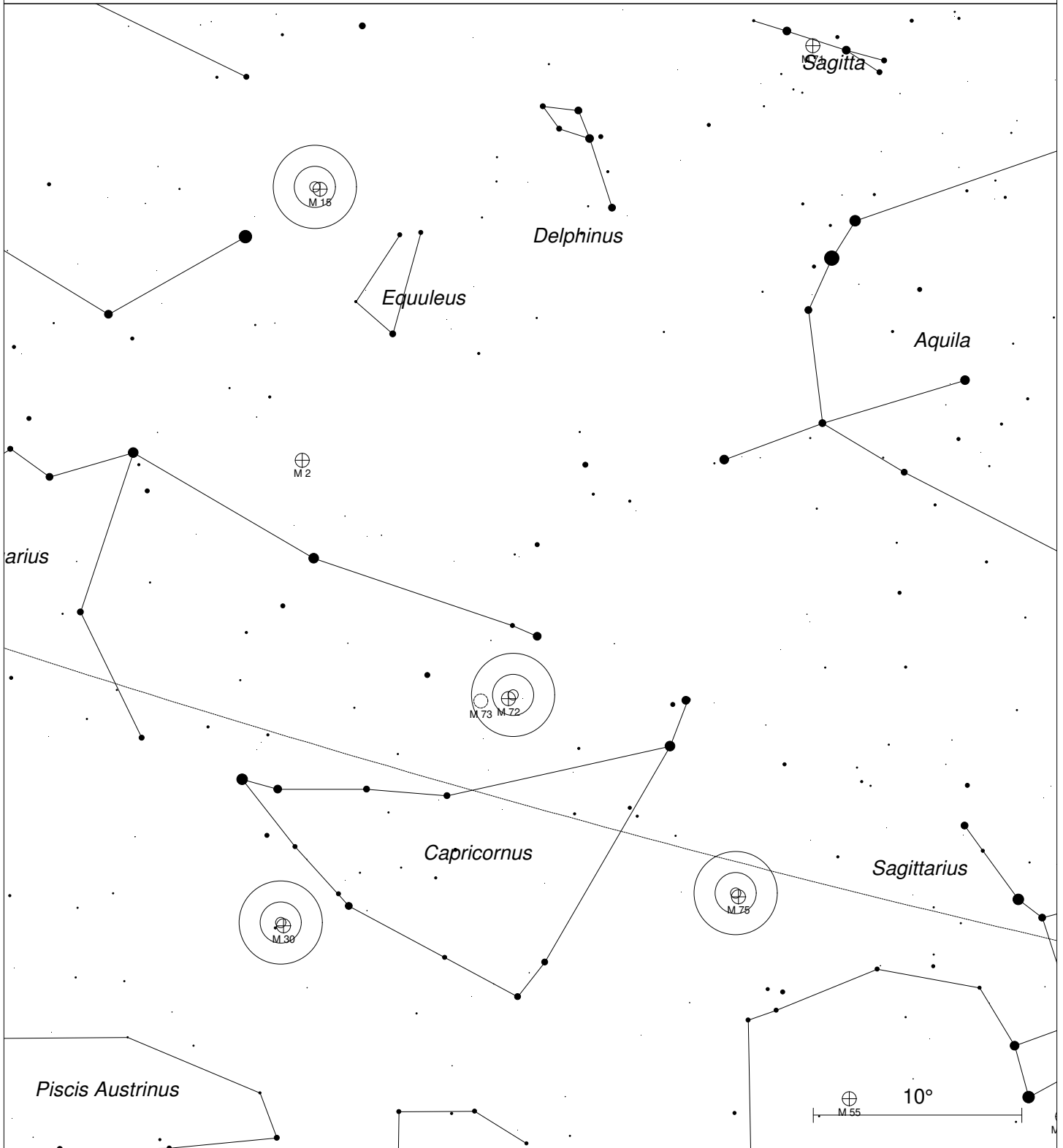
| STARS            | SYMBOLS         |                    |
|------------------|-----------------|--------------------|
| ● <2    ● 4.5    | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5    ● 5     | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3        ● 5.5 | ○ Galaxy        | ⊗ Quasar           |
| ● 3.5     ● >6   | ○ Open Cluster  | ○ Other Object     |
| ● 4              | □ Bright Nebula |                    |

**MAP 10**  
**SAGITTARIUS, SCUTUM**  
**M6, M7, M8, M9, M11, M14, M16, M17, M18, M20, M21**  
**M22, M23, M24, M25, M26, M28, M54, M55, M69, M70**



| 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 |                    |

MAP 11  
 CAPRICORNUS, EQUULEUS  
 M2, M15, M30, M72, M73, M75



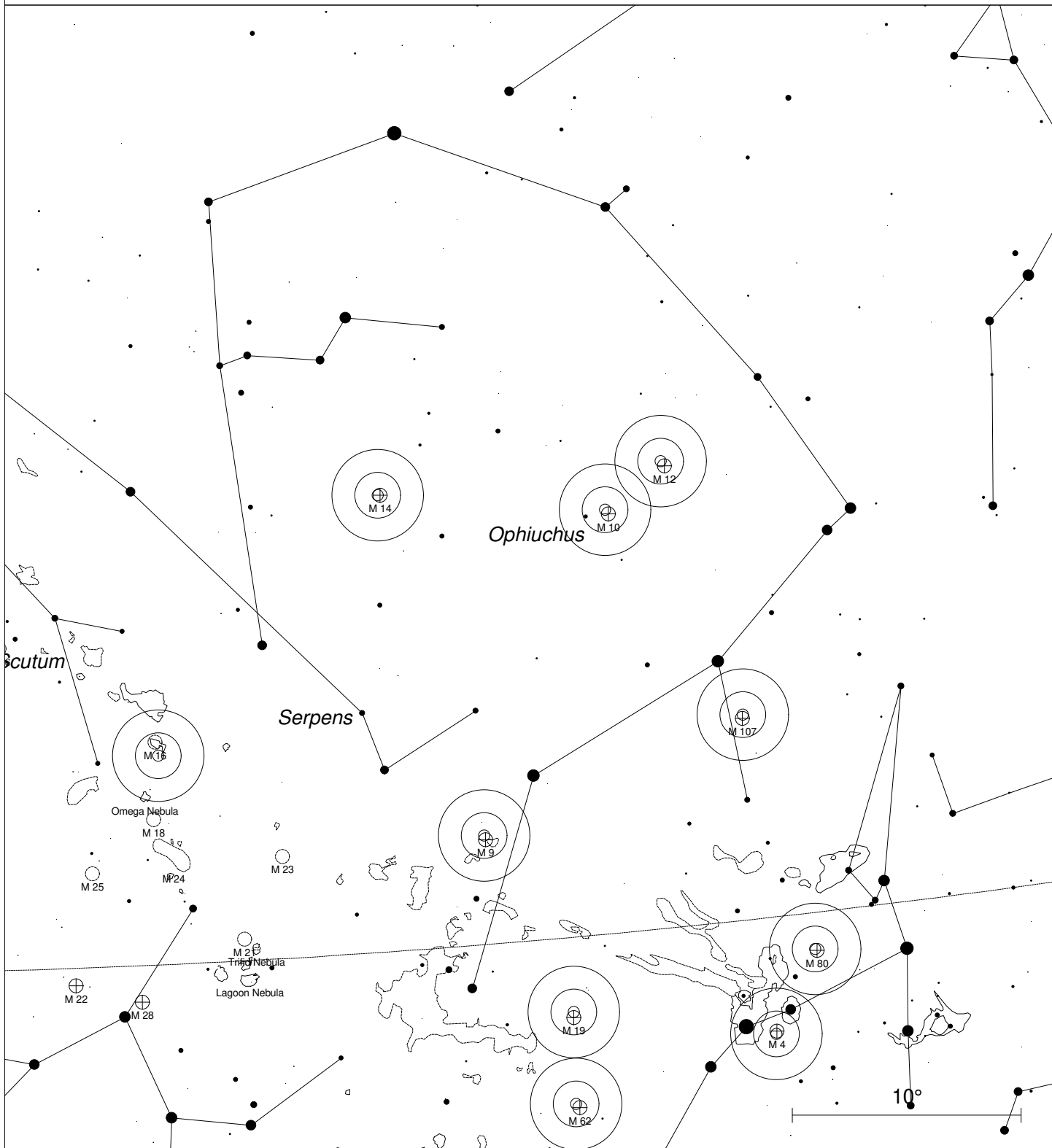
STARS

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

SYMBOLS

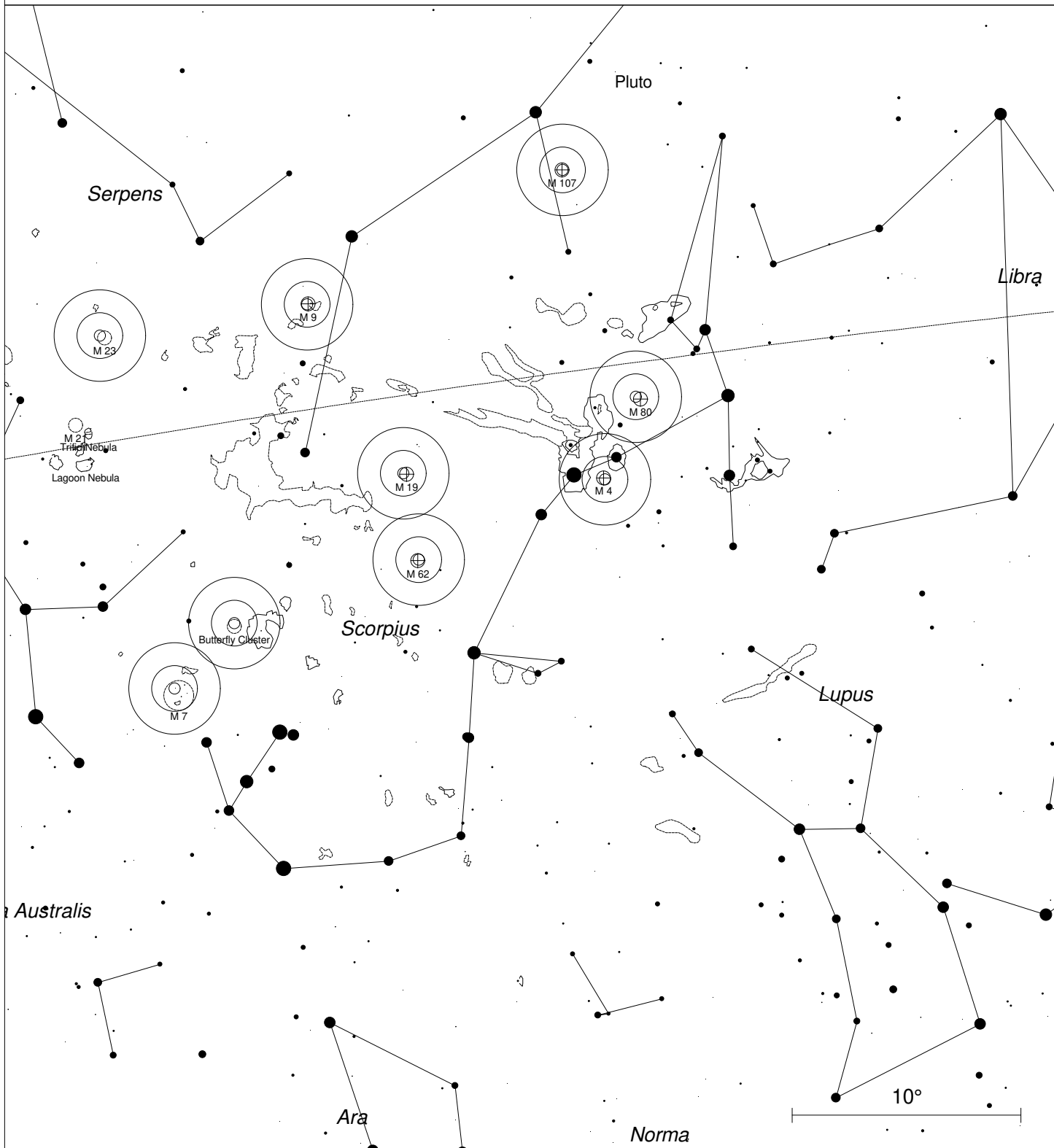
- ☄ Comet
- ♁ Asteroid
- Galaxy
- Open Cluster
- Bright Nebula
- ⊕ Globular Cluster
- ⊛ Planetary Nebula
- ⊠ Quasar
- Other Object

**MAP 12**  
**OPHIUCHUS**  
**M9, M10, M12, M14, M80, M107**



| STARS | SYMBOLS         |                    |
|-------|-----------------|--------------------|
| ● <2  | ☄ Comet         | ⊕ Globular Cluster |
| ● 2.5 | ♁ Asteroid      | ⊕ Planetary Nebula |
| ● 3   | ☾ Galaxy        | ⊕ Quasar           |
| ● 3.5 | ○ Open Cluster  | ○ Other Object     |
| ● 4   | □ Bright Nebula |                    |

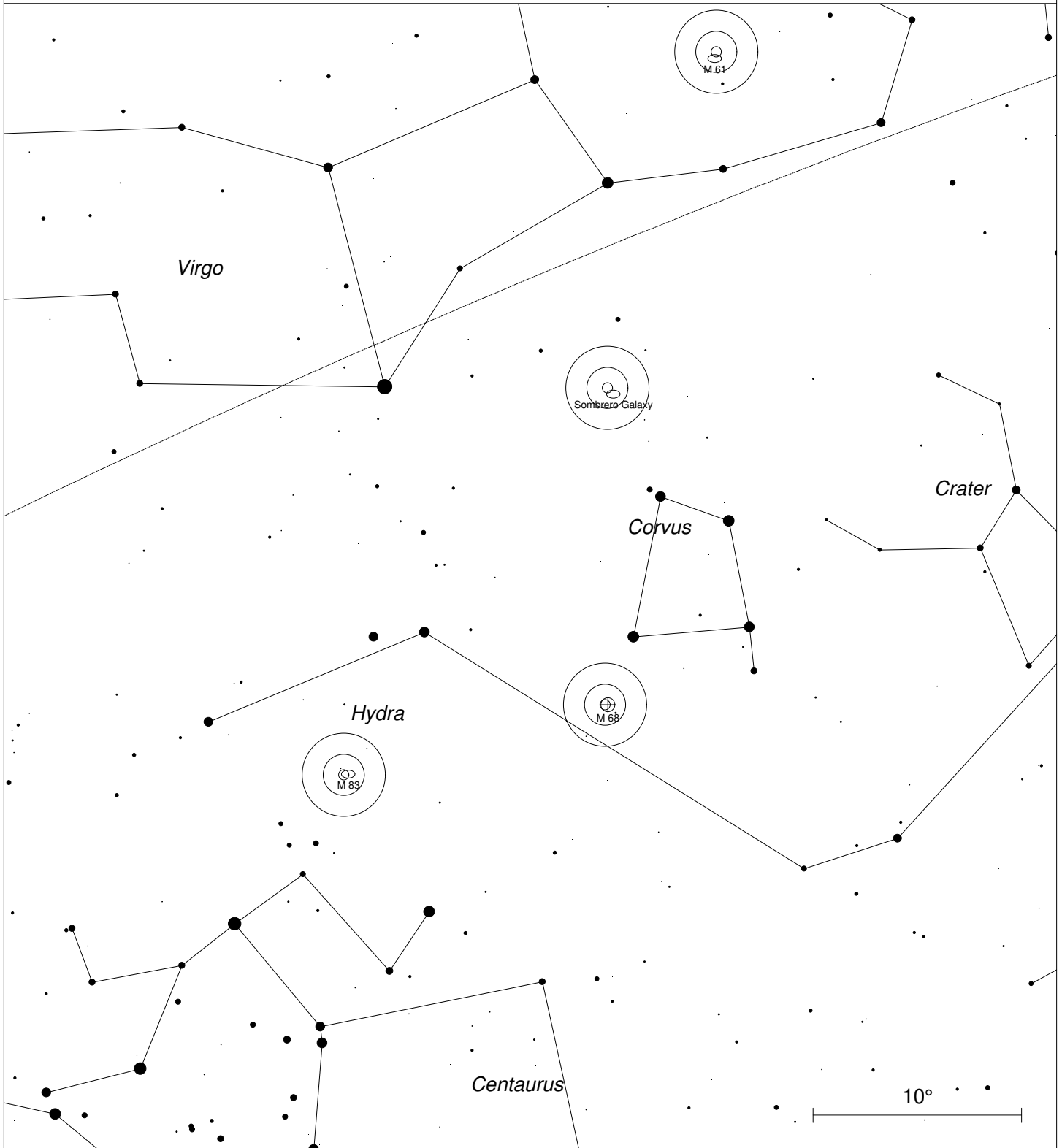
**MAP 13**  
**SCORPIUS**  
*M4, M6, M7, M9, M19, M62, M80, M107*



| 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 |                    |



**MAP 14**  
**CORVUS**  
**M61, M68, M83, M104**



**STARS**

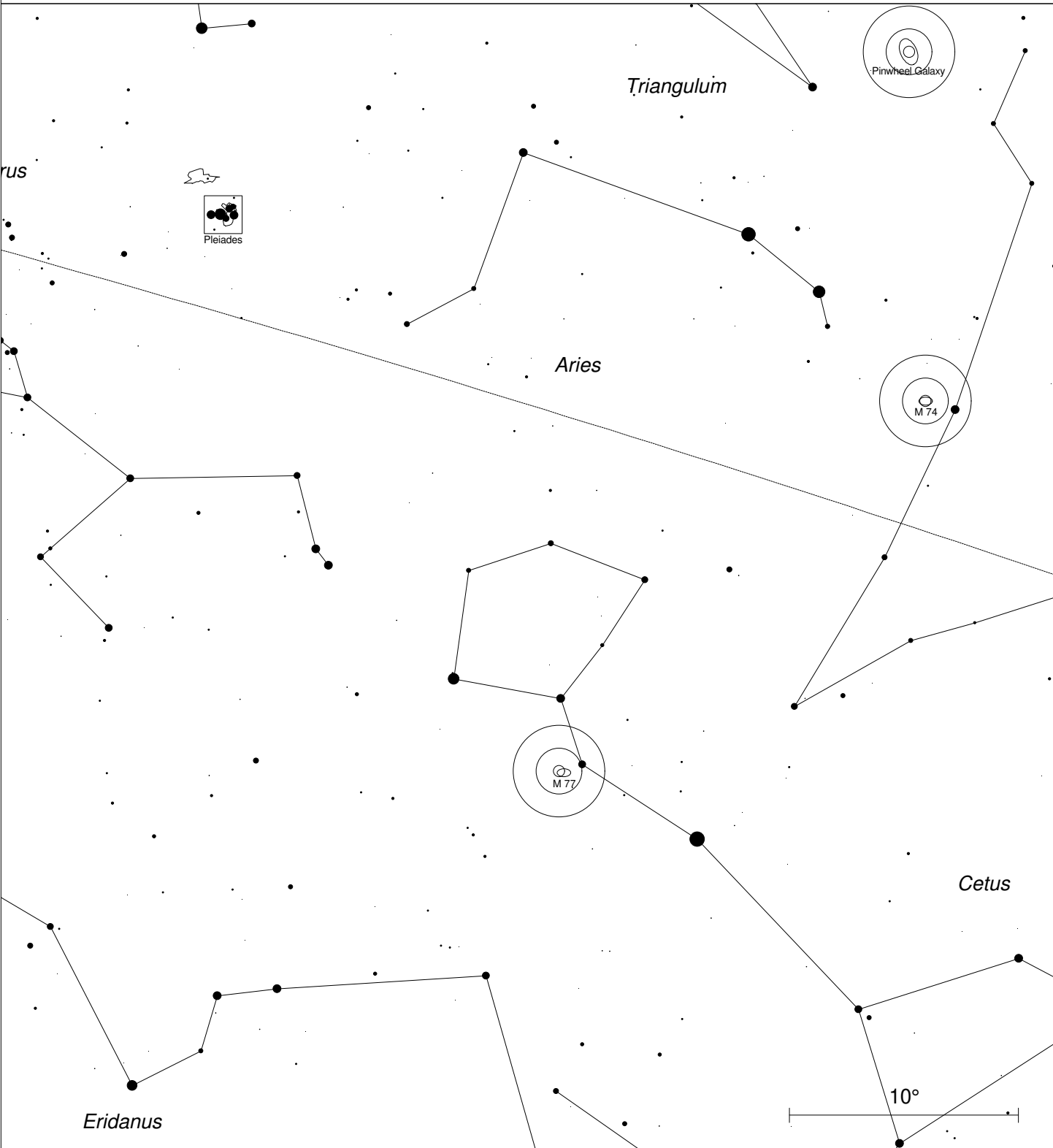
- <2    ● 4.5
- 2.5    ● 5
- 3       ● 5.5
- 3.5    ● >6
- 4

**SYMBOLS**

- ☄ Comet
- ☾ Asteroid
- Galaxy
- Open Cluster
- Bright Nebula
- ⊕ Globular Cluster
- ⊕ Planetary Nebula
- ⊗ Quasar
- Other Object

10°

**MAP 15**  
**ARIES, Cetus**  
**M45, M74, M77**



**STARS**

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

**SYMBOLS**

- ☄ Comet
- ☾ Asteroid
- Galaxy
- Open Cluster
- Bright Nebula
- ⊕ Globular Cluster
- ⊕ Planetary Nebula
- ⊗ Quasar
- Other Object