Oamaru Lodge Stargazing Guide

Monthly targets for our 10" Dobsonian reflector · 45°S · Oamaru Dark Sky Reserve

Oamaru Lodge Stargazing Guide

Oamaru, on the South Island's east coast, is one of New Zealand's finest stargazing destinations. With remarkably low light pollution, it offers some of the darkest skies accessible from any New Zealand town, with the full splendour of the southern Milky Way on display.

At the lodge we use a 10-inch Dobsonian reflector telescope — a large, powerful instrument ideally suited to visual deep-sky observing. Through it, guests can explore objects that are simply not visible from the northern hemisphere: the Omega Centauri globular cluster (10 million stars in a single ball), the Jewel Box (a cluster of vivid multi-coloured stars), the Magellanic Clouds (companion galaxies to our own Milky Way), and the sweeping star fields of the southern Milky Way itself.

This guide lists the best targets for each month of the year, along with a brief description of what to expect. Every object listed is visible in our telescope from Oamaru under typical conditions.

Tips for First-Time Stargazers

Give your eyes time to adjust. Full dark adaptation takes about 20 minutes — your eyes become dramatically more sensitive as they adjust to the dark. Avoid looking at bright screens during this time.

Dress warmly. Oamaru nights can be cold even in summer. We recommend bringing an extra layer — you will be standing still and looking upward, and the cold arrives quickly once the sun goes down.

Start with your naked eyes. Before looking through the telescope, spend a few minutes simply looking up. The Milky Way, the Southern Cross, and the Magellanic Clouds are all visible to the naked eye from the lodge on clear nights — something many of our guests have never seen before.

Choose moonless nights. The Moon, beautiful as it is, washes out faint deep-sky objects with its reflected light. The best stargazing occurs in the week or so around new Moon each month. See the moon phase calendar on the following page.

What you see with the eye is different from what you can photograph. The human eye at the eyepiece of a large telescope on a dark night cannot discern the colours, depth, and detail that photographs can convey. Nevertheless what the telescope reveals is still astonishing.

Southern skies are unique. Many of the objects in this guide — Omega Centauri, the Jewel Box, the Tarantula Nebula, 47 Tucanae — are simply not visible from Europe, North America, or most of Asia. You are seeing things that the vast majority of the world's population will never see—unless they make their way to the Southern Hemisphere!

When to Go Stargazing: Moon Phase Guide

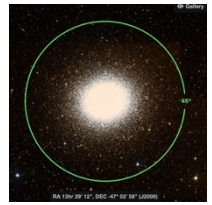
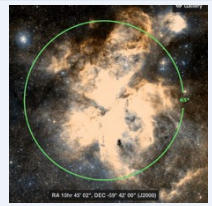
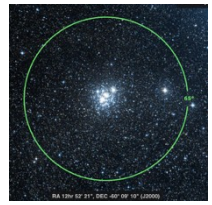
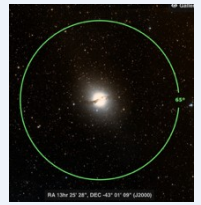
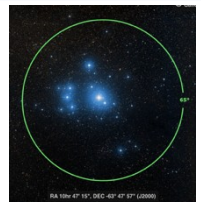
The Moon is the biggest natural obstacle to deep-sky observing — even a half-Moon will significantly reduce the visibility of faint nebulae and galaxies. The dates below are approximate new Moon dates for 2026-2027; the week centred on each new Moon offers the darkest skies of the month. Full Moon dates fall roughly 14 days after each new Moon.

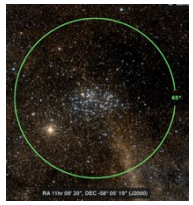
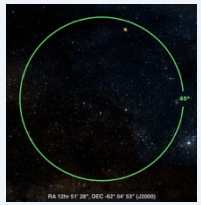
Month	New Moon (approx.)	What's well-placed
January 2027	New Moon: ~8 January	Omega Centauri, Jewel Box, Carina Nebula, Magellanic Clouds
February 2027	New Moon: ~7 February	Scorpius clusters, Lagoon & Trifid Nebulae, Large Magellanic Cloud
March 2027	New Moon: ~8 March	Vela clusters, Eight-Burst Nebula, Fornax galaxies
April 2027	New Moon: ~7 April	Omega Centauri (best), Jewel Box, Virgo galaxy cluster
May 2027	New Moon: ~6 May	Omega Centauri overhead, Jewel Box, Sombrero Galaxy, Scorpius rising
June 2026	New Moon: ~15 June	Milky Way overhead, Scorpius, Sagittarius nebulae & clusters — peak month
July 2026	New Moon: ~14 July	Milky Way & galactic centre, Wild Duck Cluster, Helix Nebula rising
August 2026	New Moon: ~13 August	NGC 6752 (best), Saturn Nebula, Scorpius/Sagittarius still well placed
September 2026	New Moon: ~11 September	Silver Coin Galaxy (best), Helix Nebula (peak), Magellanic Clouds returning
October 2026	New Moon: ~11 October	Fornax galaxies (best), NGC 1365 (best), Orion rising late evening
November 2026	New Moon: ~9 November	Orion Nebula, Pleiades, Auriga clusters, Carina returning
December 2026	New Moon: ~9 December	Orion Nebula overhead (best), Tarantula Nebula, Jewel Box returning

January

SUMMER

January brings long warm evenings and the southern Milky Way arching overhead from horizon to horizon. The constellations of Centaurus and Crux (the Southern Cross) ride high in the south, offering some of the finest objects in the entire sky — including Omega Centauri, the greatest globular cluster known, and the Jewel Box, one of the most colourful star clusters visible from Earth. The Carina Nebula and the neighbouring star clouds of the southern Milky Way are a constant backdrop for the entire evening. Both Magellanic Clouds — satellite galaxies of our own Milky Way — are well placed in the south-west.

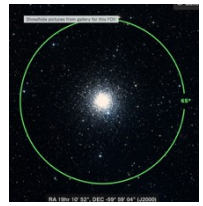
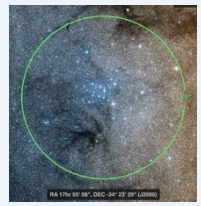
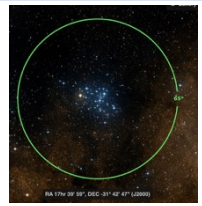
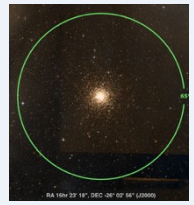
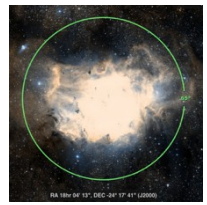
Object Name	Description	What you can expect to see
Omega Centauri *NGC 5139 · Centaurus*	The finest globular cluster in the sky — 10 million stars in a single ball. Resolves to individual sparkling stars at its edges. Absolutely guaranteed to produce gasps.	
Eta Carinae Nebula *NGC 3372 · Carina*	A vast emission nebula four times the size of the Orion Nebula. Its inner Keyhole Nebula and the surrounding star fields make for a spectacular wide-field sweep.	
Jewel Box *NGC 4755 · Crux*	Vivid open cluster beside the Southern Cross — blue-white stars contrasting with a distinctive orange-red supergiant. One of the most colourful clusters in the sky.	
Centaurus A *NGC 5128 · Centaurus*	Peculiar radio galaxy with a dramatic dark dust lane bisecting a giant elliptical — the result of an ancient galaxy merger. Dust lane clearly visible in a 10".	
Southern Pleiades *IC 2602 · Carina*	A brilliant naked-eye cluster centred on Theta Carinae — ~60 stars in a wide field. Use the 40mm for a gorgeous view rivalling the northern Pleiades.	

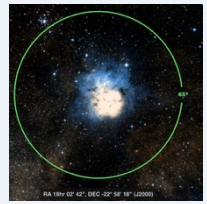
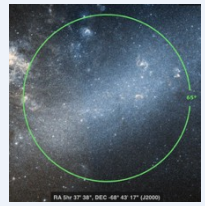
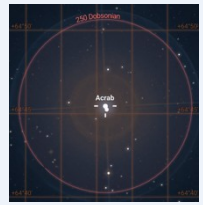
Object Name	Description	What you can expect to see
Tarantula Nebula *NGC 2070 · Dorado (LMC)*	The most luminous nebula in the Local Group. If as close as Orion's Nebula it would cast shadows. Spider-leg filaments and central cluster R136 are stunning.	
47 Tucanae *NGC 104 · Tucana*	Second finest globular in the sky, sitting right next to the Small Magellanic Cloud. Extremely rich and well-resolved in a 10", with a blazing compressed core.	
Alpha Crucis (Acrux) *HIP 60718 · Crux*	The brightest star in the Southern Cross — a beautiful double of two blue-white stars split cleanly at moderate power. A third companion lies further away.	
Wishing Well Cluster *NGC 3532 · Carina*	John Herschel called this 'the most brilliant cluster in the heavens.' Over 150 stars in a rich oval pattern with chains and loops — a delight at any power.	
Coalsack Dark Nebula *— · Crux*	A strikingly dark void in the Milky Way beside the Southern Cross — a dust cloud blocking stars behind it. Deeply impressive to visitors unfamiliar with dark nebulae.	

February

SUMMER

February evenings continue to offer the full richness of the southern summer sky. Scorpius rises in the east as the evening progresses, bringing with it some of the finest open clusters and nebulae in the sky. The Large Magellanic Cloud remains high in the south and rewards long, slow sweeps with a wide-field eyepiece — it is an entire galaxy to explore, containing clusters and nebulae of its own. Sagittarius, with its treasure-house of globular clusters and nebulae, climbs higher as the night goes on.

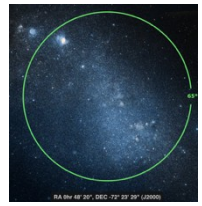
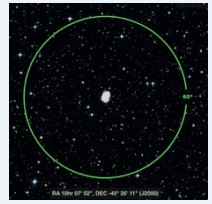
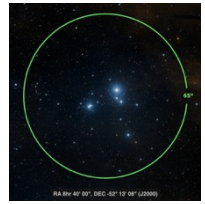
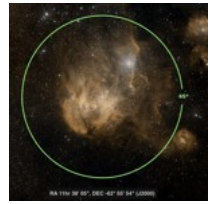
Object Name	Description	What you can expect to see
NGC 6752 *NGC 6752 · Pavo*	The third brightest globular cluster in the sky — frequently overlooked. Beautifully resolved to individual stars in a 10", with a striking compressed core.	
Ptolemy's Cluster *M7 / NGC 6475 · Scorpius*	A huge naked-eye open cluster in Scorpius's tail — one of the closest clusters to Earth at only 800 ly. Over 80 stars; best at very low power.	
Butterfly Cluster *M6 / NGC 6405 · Scorpius*	Near M7, this cluster has a distinctive butterfly wing pattern at medium power, with ~80 stars. An orange supergiant (BM Sco) provides lovely colour contrast.	
M4 *M4 / NGC 6121 · Scorpius*	The nearest globular cluster to Earth at only 5,600 ly. Beautifully resolved even at low magnification, with a distinctive central bar of stars running north-south.	
Lagoon Nebula *M8 / NGC 6523 · Sagittarius*	A large emission nebula bright enough to see naked-eye. Contains young cluster NGC 6530 and an active star-forming hourglass region. Rich in structural detail.	

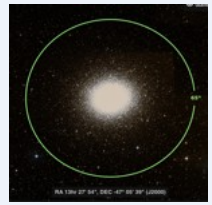
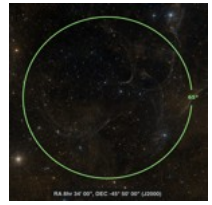
Object Name	Description	What you can expect to see
Trifid Nebula *M20 / NGC 6514 · Sagittarius*	Named for three dark dust lanes dividing its glowing face. A remarkable combination of emission and reflection nebula in one object — the three-lobed split is clearly visible.	
M22 *M22 / NGC 6656 · Sagittarius*	One of the finest globulars in Sagittarius, better placed from southern latitudes. Slightly elongated with excellent resolution in a 10". Wonderful comparison with Omega Cen.	
Large Magellanic Cloud *LMC · Dorado/Mensa*	Our nearest large galactic neighbour at 160,000 ly. Sweep slowly with the 40mm — the density of clusters, nebulae, and star clouds can occupy guests for an entire evening.	
IC 2602 (revisit) *IC 2602 · Carina*	The surrounding star field toward the Carina spiral arm is one of the richest stretches of Milky Way visible from Oamaru. Simply sweep the region freely to see the full splendour of this field.	
Beta Scorpii (Graffias) *HIP 78820 · Scorpius*	A stunning wide double at the head of Scorpius — two blue-white stars cleanly separated even at low magnification. One of the best doubles in the southern sky.	

March

LATE SUMMER / EARLY AUTUMN

As autumn approaches, the Milky Way still dominates the southern sky in the early evening, but begins to shift westward as the night progresses. The Vela and Puppis constellations are well-placed, offering a wealth of open clusters and the remarkable Vela Supernova Remnant — the expanding shell of a star that exploded only 10,000 years ago, close enough to Earth to have been visible in broad daylight. The Fornax Galaxy Cluster climbs in the north, offering a window onto a group of galaxies some 65 million light-years away.

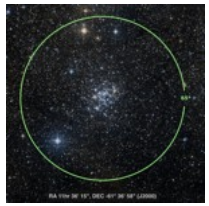
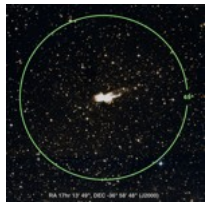
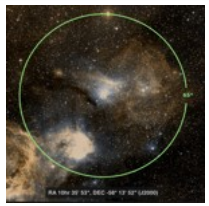
Object Name	Description	What you can expect to see
Small Magellanic Cloud *SMC · Tucana*	Companion satellite galaxy at ~200,000 ly. Contains bright nebula NGC 346 and multiple star clusters. The pairing with 47 Tucanae in the same field is unique to southern skies.	
Eight-Burst Nebula *NGC 3132 · Vela*	One of the brightest planetary nebulae in the southern sky — a distinct oval ring with a faint central star visible in a 10". The southern equivalent of M57 (Ring Nebula).	
IC 2391 *IC 2391 · Vela*	A spectacular naked-eye open cluster around Omicron Velorum — one of the youngest clusters known (~50 million years), dominated by brilliant blue-white stars.	
NGC 2516 *NGC 2516 · Carina*	Rich open cluster of ~100 stars with a distinctive orange-red giant providing colour contrast. High in autumn skies, an underrated showpiece that rewards slow sweeping.	
Running Chicken Nebula *IC 2944 · Centaurus*	Large emission nebula containing Thackeray's Globules — dark blobs of gas silhouetted against the glowing nebula. Look for them as small dark spots near the brightest region.	

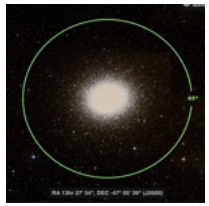
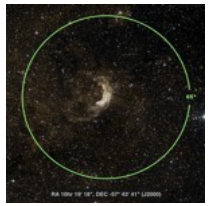
Object Name	Description	What you can expect to see
NGC 362 *NGC 362 · Tucana*	A superb, compact globular beside 47 Tucanae. Smaller and denser with a brilliantly concentrated core — the two clusters make an excellent comparison in the same wide-field view.	
NGC 1399 / NGC 1404 *Fornax Cluster · Fornax*	Two giant elliptical galaxies at the core of the Fornax Galaxy Cluster — visible in the same field. A chance to see that galaxies cluster in groups just as stars do.	
Fornax A *NGC 1316 · Fornax*	A peculiar lenticular galaxy and one of the brightest radio sources in the sky. Shows a bright core with faint disturbed stellar material — the aftermath of a galaxy merger.	
Vela Supernova Remnant *Vela SNR · Vela*	Filamentary remnant of a supernova ~10,000 years ago, only ~800 ly away. Individual wisps visible in a 10" with an OIII filter — the closest supernova remnant to Earth.	
Gamma Velorum *HIP 39953 · Vela*	The brightest Wolf-Rayet star in the sky — a massive star blowing itself apart. An attractive visual double, and its violent nature as a pre-supernova makes a dramatic story.	

April

AUTUMN

Autumn nights in Oamaru are often particularly clear and stable — some of the best seeing of the year. Centaurus transits almost directly overhead, putting Omega Centauri and Centaurus A at their best. The Southern Cross reaches its highest point of the year in April and May, and the Jewel Box and Coalsack are ideally placed for observation. The Virgo Galaxy Cluster becomes accessible in the north, offering a remarkable vista of dozens of galaxies in a small area of sky — a compelling demonstration of the large-scale structure of the universe.

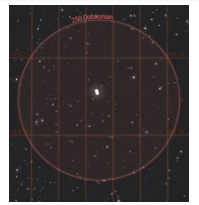
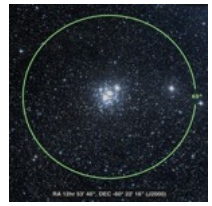
Object Name	Description	What you can expect to see
Pearl Cluster *NGC 3766 · Centaurus*	Compact rich cluster of ~100 stars with subtle colour contrast from red and blue giants. Stars arranged in chains give it a distinctive character often overlooked next to the Jewel Box.	
M46 & M47 *Puppis*	Two rich clusters in the same wide field — M47 (brighter, coarser) and M46 (fainter, 500 members). M46 also contains a foreground planetary nebula NGC 2438 as a bonus target.	
Bug Nebula *NGC 6302 · Scorpius*	A spectacular bipolar planetary nebula — even in a 10" the elongated butterfly shape is visible. The central star is one of the hottest known (200,000°C) but hidden by a dust disc.	
NGC 4945 *NGC 4945 · Centaurus*	A bright edge-on spiral galaxy similar in type to the Milky Way. Its long thin profile and notable dark dust lane are easily seen in a 10". One of the closest Seyfert galaxies.	
NGC 3293 *NGC 3293 · Carina*	Young, bright cluster dominated by blue supergiants with a striking red supergiant for colour contrast. Very compact and visually punchy — one of the finest clusters in Carina.	

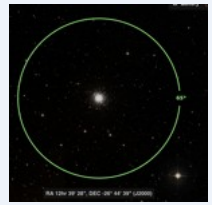
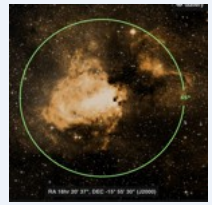
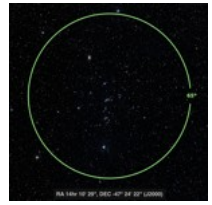
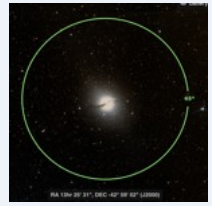
Object Name	Description	What you can expect to see
Silver Coin Galaxy *NGC 253 · Sculptor*	One of the most detailed galaxies in the entire sky. An edge-on spiral with mottling, dust lanes, and star-forming knots visible in a 10". Catch it before it sets in early autumn.	
Omega Centauri (revisit) *NGC 5139 · Centaurus*	April is arguably the best month — you can resolve the outer halo star by star and appreciate how far the cluster extends. An ever-rewarding object for all skill levels.	
Mu Crucis *HIP 62931 · Crux*	A fine wide double star in the Southern Cross — two hot blue-white stars easily split at low power. A good starter double for new observers before moving to tighter pairs.	
NGC 3199 *NGC 3199 · Carina*	A circular wind-blown bubble nebula created by Wolf-Rayet star WR18. Shows as a faint arc of glowing gas in a 10" under dark skies; an OIII filter improves contrast considerably.	
NGC 4976 Group *NGC 4976 · Centaurus*	A bright elliptical galaxy near Omega Cen with several companion galaxies visible in the same low-power field. A satisfying mini-cluster of island universes in a single eyepiece view.	

May

AUTUMN

May sees Centaurus and Crux near the zenith in the early evening, making this arguably the finest month for the great southern showpieces. Omega Centauri, the Jewel Box, and Centaurus A are all at their best. The Virgo Galaxy Cluster is well placed in the north for the whole evening, while Scorpius begins to rise in the east by midnight, hinting at the winter riches to come. The nights are noticeably longer now, giving more time at the eyepiece before dawn.

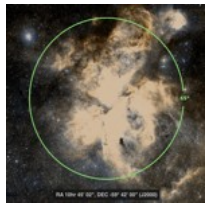
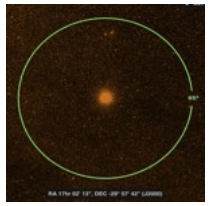
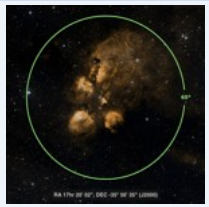
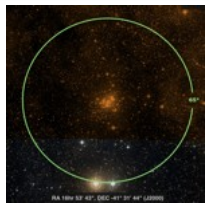
Object Name	Description	What you can expect to see
Sombrero Galaxy *M104 / NGC 4594 · Virgo*	One of the most photogenic galaxies — an edge-on spiral with a prominent central bulge and a dark equatorial dust lane clearly visible in a 10". Unmistakable once seen.	
Blue Planetary *NGC 3918 · Centaurus*	Nicknamed for its vivid blue-green colour — one of the brightest planetary nebulae in the southern sky. Its intense colour is immediately apparent even at low magnification.	
Alpha Centauri *HIP 71683 · Centaurus*	Our nearest stellar neighbour at 4.37 ly — two yellow-orange stars currently well separated. The light you're seeing left these stars over 4 years ago.	
Virgo Galaxy Cluster *M84, M86, M87 · Virgo*	Dozens of galaxies in a small area of sky. Start at Markarian's Chain (M84/M86), then hop to M87, M89, M90 and more. The scale of the universe becomes tangible.	
Jewel Box (near zenith) *NGC 4755 · Crux*	The Jewel Box near its zenith in May — the ideal time. Use 150× to pick out colour contrasts; compare the deep orange of BM Crucis against the blue-white majority.	

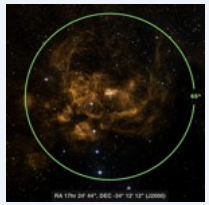
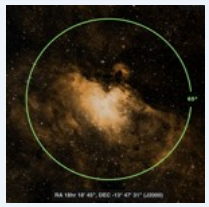
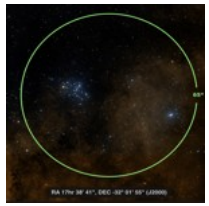
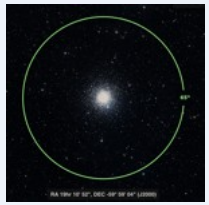
Object Name	Description	What you can expect to see
M68 *M68 / NGC 4590 · Hydra*	A loose, well-resolved globular cluster high in the sky from Oamaru — yields individual stars right to its centre in a 10", making it excellent for showing cluster structure.	
NGC 5286 *NGC 5286 · Centaurus*	A rich compact globular near Centaurus often ignored next to famous neighbours. Shows granular texture and partial edge resolution in a 10". Easy to locate near M Centauri.	
Omega Nebula *M17 / NGC 6618 · Sagittarius*	Rising in the east in May — one of the brightest emission nebulae. Its iconic swan shape is clearly visible in a 10", with the associated star cluster evident at its edges.	
NGC 5460 *NGC 5460 · Centaurus*	A scattered but rich open cluster of ~40 stars. Best at very low power, floating in a sea of Milky Way background stars — a beautiful wide-field scene unique to southern observers.	
NGC 5128 (Centaurus A) *NGC 5128 · Centaurus*	Near its overhead zenith in May — the ideal time for detail in the dust lane. Higher power reveals structure; the lane absorbs the background elliptical light completely.	

June

WINTER

June marks the peak of the southern stargazing year. The Milky Way arches magnificently overhead from south to north, crossing the zenith and offering the richest star fields visible from any location on Earth. The galactic centre in Sagittarius transits high in the north-west, and Scorpius sweeps across the northern sky in a blaze of bright stars, clusters, and nebulae. The long winter nights — darkness from around 6pm to 8am — mean that even visitors who retire early will experience hours of prime observing time. This is the month to let guests simply lie back and absorb the Milky Way with their naked eyes before going to the telescope.

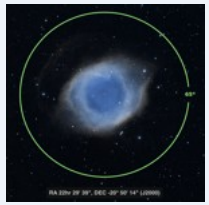
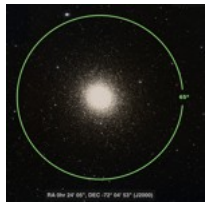
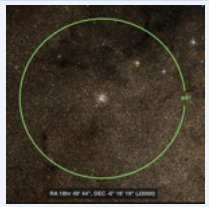
Object Name	Description	What you can expect to see
Eta Carinae Nebula *NGC 3372 · Carina*	Prime time for the Carina region. The Keyhole Nebula's dark silhouette against bright emission is stunning. Push magnification to study the tiny Homunculus around Eta Carinae.	
M19 *M19 / NGC 6273 · Ophiuchus*	The most oblate (flattened) globular in Messier's catalogue — noticeably non-spherical in a 10". Very rich and densely concentrated, close to the galactic centre.	
M62 *M62 / NGC 6266 · Ophiuchus*	A rich, compressed globular with an asymmetric core — denser on one side, suggesting close passages near the galactic centre. Sits in a magnificent Milky Way star field.	
Cat's Paw Nebula *NGC 6334 · Scorpius*	A chain of emission nebula lobes resembling a cat's paw print. One of the most active star-forming regions near the Sun. An OIII or H-beta filter enhances contrast significantly.	
NGC 6231 *NGC 6231 · Scorpius*	A brilliant young cluster near Scorpius's tail, packed with blue supergiant stars. One of the youngest clusters known (~3 million years). Vivid and compact in the eyepiece.	

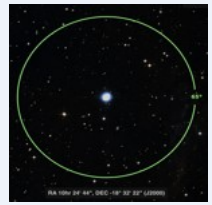
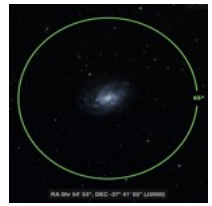
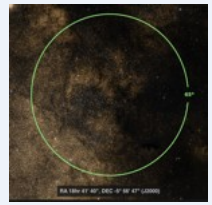
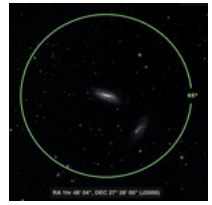
Object Name	Description	What you can expect to see
War & Peace Nebula *NGC 6357 · Scorpius*	Large emission nebula containing young star cluster Pismis 24 at its heart — once home to a candidate for most massive star known. Visible as a glowing patch with internal structure.	
Nu Scorpii *HIP 79374 · Scorpius*	A remarkable quadruple star — a wide pair at low power, each resolving further at high power into another pair. Four stars in a single view: a perfect illustration of stellar multiplicity.	
Eagle Nebula *M16 / NGC 6611 · Serpens*	Home to the famous Pillars of Creation — an embedded star cluster within glowing gas. The pillars require excellent conditions and high magnification in a 10"; a worthy challenge.	
M6 & M7 (prime) *Scorpius tail*	Scorpius tail clusters at their best in June. Do a naked-eye sweep from Antares first to put the eyepiece views in context. The Milky Way here is extraordinarily rich.	
NGC 6752 (revisit) *NGC 6752 · Pavo*	Transiting high in June — ideal for resolution. At 200× individual stars resolve right to the compressed core. Note the three concentric zones of density under good conditions.	

July

WINTER

Winter continues to deliver spectacular skies. The Milky Way is still high overhead in the early evening, and the globular cluster NGC 6752 in Pavo reaches its best position of the year. Sagittarius and the galactic centre are well placed throughout the night. The Small Magellanic Cloud and 47 Tucanae are high in the south, and the Helix Nebula — the largest planetary nebula in apparent size — rises in the east for late-evening viewing. July also brings the best position of the year for the Wild Duck Cluster in Scutum, one of the richest open clusters known.

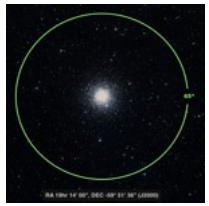
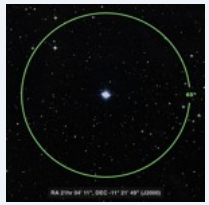
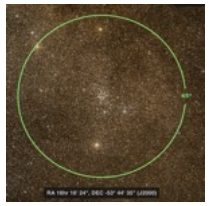
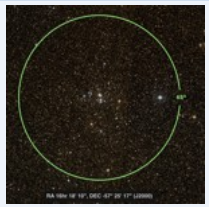
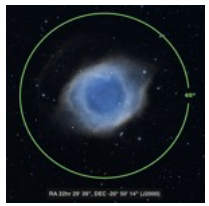
Object Name	Description	What you can expect to see
Silver Coin Galaxy *NGC 253 · Sculptor*	Back in excellent position in the east. Mottled lane structure, star-forming knots, and a bright nucleus all visible. Compare its edge-on profile with the rounder NGC 247 nearby.	
Helix Nebula *NGC 7293 · Aquarius*	The largest planetary nebula in angular size — the 'Eye of God.' In a 10" under dark skies the ring structure is clear with brighter inner and fainter outer rings.	
47 Tucanae (revisit) *NGC 104 · Tucana*	At its best position in July. Long winter nights allow extended sessions — step up magnification progressively to resolve the core, then pull back to appreciate the sweeping halo.	
Wild Duck Cluster *M11 / NGC 6705 · Scutum*	One of the richest open clusters known — nearly 3,000 stars. A fan-shaped swarm at low power; higher power resolves hundreds of individual stars. A Milky Way highlight.	
M55 *M55 / NGC 6809 · Sagittarius*	One of the most open globulars in the Messier catalogue — large, diffuse, and resolving almost like a rich open cluster. High from Oamaru in July; a wonderful comparison target.	

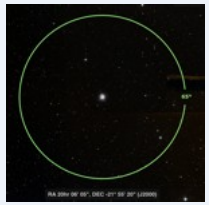
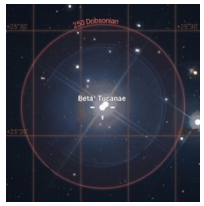
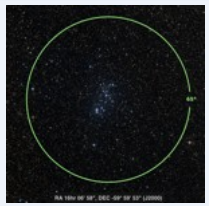
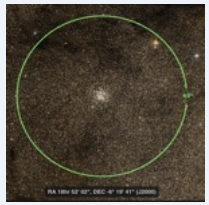
Object Name	Description	What you can expect to see
Ghost of Jupiter *NGC 3242 · Hydra*	A bright, round planetary nebula showing a distinct inner disc and faint outer halo at 200×, with the central star visible in a 10". Its blue-green colour is immediately apparent.	
NGC 300 *NGC 300 · Sculptor*	A face-on spiral in the Sculptor Group — hints of spiral pattern and HII region knots in a 10" under good conditions. Part of the same group as NGC 253, both within ~6 million lightyears.	
Scutum Star Cloud *— · Scutum*	A dense concentration of Milky Way stars visible as a bright naked-eye cloud. Through the 40mm the richness is overwhelming — thousands of resolvable stars. Unique to dark-sky sites.	
NGC 6723 & NGC 6726/27 *CrA / Sagittarius*	A fine globular cluster sharing the field with a colourful blue reflection nebula — one of the most beautiful pairings of completely different object types in the same eyepiece view.	
Corona Australis Nebula *NGC 6726/27 · CrA*	A blue reflection nebula surrounding young stars in an active star-forming cloud. Irregular comet-like NGC 6729 changes in brightness over weeks as variable star R CrA fluctuates.	

August

LATE WINTER

August is the last full month of winter darkness, and the skies remain exceptional. The Milky Way is still high, the Scorpius/Sagittarius region is well placed in the north-west, and the southern constellations of Pavo, Indus, and Microscopium bring some lesser-known but rewarding targets into view. This month also sees the Saturn Nebula in Aquarius at a good altitude — one of the most visually distinctive planetary nebulae, with its Saturn-like extensions visible in a 10". Oamaru's winter nights can be chilly, but the atmospheric stability they bring often produces the finest seeing of the year.

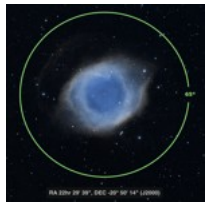
Object Name	Description	What you can expect to see
NGC 6752 (best month) *NGC 6752 · Pavo*	August is the ideal month — transiting high with minimal atmospheric distortion. Three-tiered density structure is beautiful in a 10". At 200× individual stars resolve right to the core.	
Saturn Nebula *NGC 7009 · Aquarius*	One of the most famous planetary nebulae — at high magnification the 'ansae' (Saturn-ring-like extensions) are visible in a 10". Vivid blue-green colour and one of the brightest planetaries.	
NGC 6067 *NGC 6067 · Norma*	A spectacular and largely unknown open cluster in the rich Norma star cloud, with red and yellow supergiants. The Norma region is one of the densest parts of the Milky Way.	
NGC 6087 *NGC 6087 · Norma*	A beautiful cluster centred on the Cepheid variable S Normae — watch it brighten and fade over its ~9-day cycle across successive nights. Well resolved in a 10" in a rich field.	
Helix Nebula (revisit) *NGC 7293 · Aquarius*	Higher in the sky in August. On a stable night you can often see the inner ring's brightening around its rim. The Sun will look similar in ~5 billion years.	

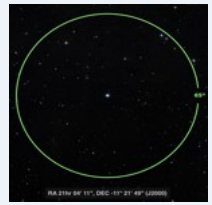
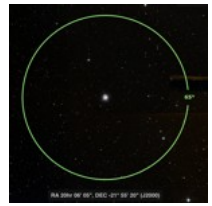
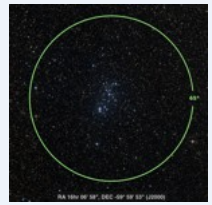
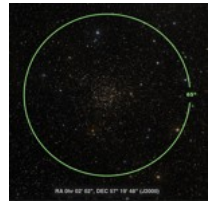
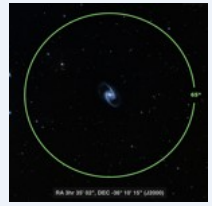
Object Name	Description	What you can expect to see
M75 *M75 / NGC 6864 · Sagittarius*	One of the most distant and concentrated Messier globulars (~67,000 ly). Appears as a very compact bright ball — its extreme concentration clearly distinguishes it from open clusters.	
Beta Tucanae *HIP 1599 · Tucana*	A wide optical triple in Tucana — three unrelated stars aligned along the line of sight, producing a striking grouping in the eyepiece. All three components white and well matched.	
NGC 6025 *NGC 6025 · TrA*	A bright, attractive open cluster in the tiny southern constellation Triangulum Australe. About 60 stars in a rich Milky Way field. A good 'filler' target between major showpieces.	
NGC 7331 *NGC 7331 · Pegasus*	A bright inclined spiral galaxy rising in the north-east. At 150× mottling and hints of dust lanes appear. Four small companion galaxies (the Deer Lick Group) lie nearby.	
Wild Duck Cluster (revisit) *M11 · Scutum*	Still high in August evenings. A perfect object to alternate between the 40mm (swarm impression) and 10mm (individual star resolution) to demonstrate how magnification changes perspective.	

September

EARLY SPRING

Spring arrives and the character of the sky changes — the winter Milky Way shifts westward, and a new cast of objects rises in the east. The Sculptor constellation climbs in the south-east, bringing the Silver Coin Galaxy (NGC 253), one of the most detailed galaxies accessible to amateur telescopes, to its best position. The Helix Nebula reaches its highest altitude of the year. Andromeda rises in the north — the most distant object visible to the naked eye, at 2.5 million light-years. Both Magellanic Clouds return to good evening positions in the south.

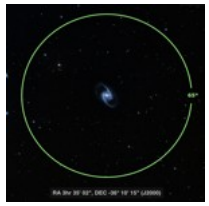
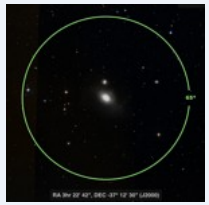
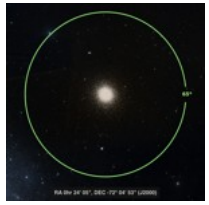
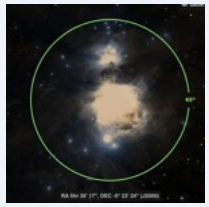
Object Name	Description	What you can expect to see
Silver Coin Galaxy (prime) *NGC 253 · Sculptor*	September is ideal — high in the north around midnight. Multiple dust lanes, star-forming knots, and asymmetric nucleus all visible in good seeing. A genuine showpiece galaxy.	
NGC 288 *NGC 288 · Sculptor*	A loose, open globular cluster visible in the same wide-field view as NGC 253 — galaxy and globular in one eyepiece, a stunning pairing unique to the Sculptor constellation.	
Helix Nebula (prime) *NGC 7293 · Aquarius*	September sees the Helix near its highest altitude from Oamaru — the best time to attempt the outer halo and central knot structures. Patient observation across magnifications rewards handsomely.	
Andromeda Galaxy *M31 · Andromeda*	The nearest large galaxy at 2.5 million ly — the farthest thing visible to the naked eye. Though low in the north from Oamaru, impressive in the 40mm with companion galaxy M32 nearby.	
NGC 7793 *NGC 7793 · Sculptor*	A face-on spiral in the Sculptor Group showing granular texture and hints of spiral structure. Part of the same galaxy group as NGC 253 and NGC 300 within ~12 million ly.	

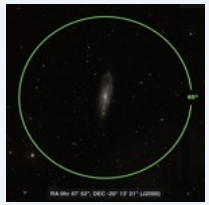
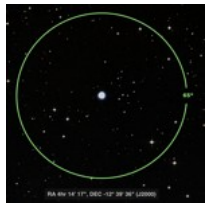
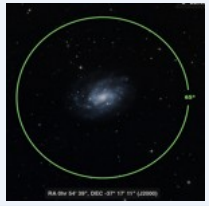
Object Name	Description	What you can expect to see
Saturn Nebula (revisit) *NGC 7009 · Aquarius*	Push to 250× on stable nights and the ansae (handle extensions) become unmistakable. The central star and multiple shells are also visible under good conditions from Oamaru.	
NGC 6752 (farewell) *NGC 6752 · Pavo*	Still well-placed in the south-west. September evenings offer a last good look. Compare in the same session with 47 Tucanae rising in the east — a fascinating contrast in concentration.	
NGC 7789 (Caroline's Rose) *NGC 7789 · Cassiopeia*	Over 1,000 stars arranged in swirling loops like rose petals — one of the finest open clusters in the sky. Low but accessible from Oamaru in September evenings.	
Fomalhaut *Alpha PsA · Piscis Austrinus*	The 'Loneliest Star' — far from any other bright stars. Famous for its confirmed debris disc and directly imaged exoplanet. This is a planetary system in formation.	
NGC 1365 (early) *NGC 1365 · Fornax*	One of the finest barred spiral galaxies in the sky, rising in the east. With a 10" on a good night, the bar and hints of two main spiral arms can be glimpsed.	

October

SPRING

October is a month of galaxies. The Fornax Galaxy Cluster reaches its peak, offering multiple bright galaxies within a small area of sky. NGC 1365 — one of the finest barred spiral galaxies in the entire sky — is at its best this month. Orion begins to rise in the late evening, announcing the return of the great nebulae of the summer sky. The nights are warming, and the comfortable temperatures make extended observing sessions more enjoyable for guests new to stargazing.

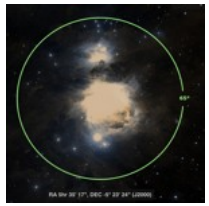
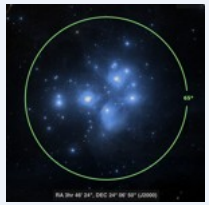
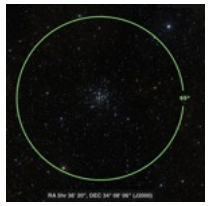
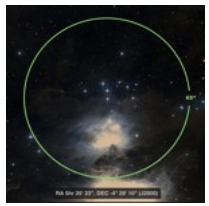
Object Name	Description	What you can expect to see
NGC 1365 (best month) *NGC 1365 · Fornax*	October is ideal for this magnificent barred spiral. The bar structure is visible in a 10" under dark skies. Its Seyfert nucleus harbours a supermassive black hole — explaining its unusually bright centre.	
Fornax Galaxy Cluster *NGC 1316/1399/1404 · Fornax*	Multiple bright galaxies within a few eyepiece fields — Fornax A (merging system), the giant central elliptical NGC 1399, and companion NGC 1404. Conveys large-scale cosmic structure powerfully.	
47 Tuc & SMC (pairing) *NGC 104 & SMC · Tucana*	Both high and well-placed. Visit 47 Tuc first, then pull back so the SMC fills the field beside it — a globular (16,000 ly) next to a whole galaxy (200,000 ly) in one eyepiece.	
Orion Nebula (early) *M42 / NGC 1976 · Orion*	Orion rises in late evening in October — the first sight of the season. By midnight it's high enough for a proper look at the Trapezium and the surrounding gas structure.	
Hyades *Mel 25 · Taurus*	The nearest open cluster at just 153 ly. Sweep the 40mm across the V-shaped face of Taurus to reveal colour variety among the ~200 member stars.	

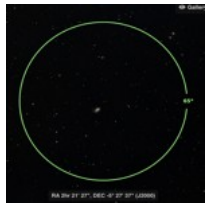
Object Name	Description	What you can expect to see
NGC 247 *NGC 247 · Cetus*	A highly elongated dwarf spiral in the Sculptor Group. Notable for a 'void' near one end — a dark region called the Eye of God visible as an absence of brightness in a 10".	
NGC 1535 (Cleopatra's Eye) *NGC 1535 · Eridanus*	A bright blue planetary nebula in Eridanus showing a two-ring appearance at medium power. Central star visible in a 10". Its blue colour is one of the most striking of any planetary.	
NGC 55 *NGC 55 · Sculptor*	An elongated Magellanic-type irregular galaxy — essentially a barred spiral seen nearly edge-on. A long irregular streak with star-forming knots visible along its length in a 10".	
Theta Eridani (Acamar) *HIP 13847 · Eridanus*	A beautiful wide double — two blue-white A-type stars easily split at low magnification. Acamar was a southern horizon marker in ancient star lore; a clean, well-matched pair.	
NGC 300 *NGC 300 · Sculptor*	A face-on spiral in the Sculptor Group, companion to NGC 253. Larger and more diffuse, showing hints of spiral pattern and HII region knots under good conditions in a 10".	

November

LATE SPRING

November brings Orion high into the evening sky — and with it the Great Orion Nebula, arguably the most impressive object visible through a telescope anywhere in the sky. The Pleiades ride high in the north-west, the Auriga clusters are well placed, and the entire region around Orion's sword rewards long, careful sweeping. The nights are shorter now, but the objects on offer are among the most dramatic of the year. Summer is approaching, and the southern constellations of Carina and Centaurus begin to reappear in the south-east by the early hours.

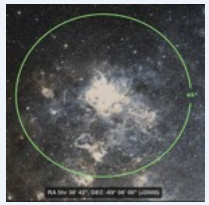
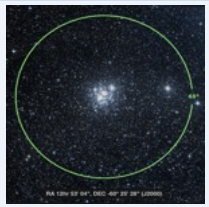
Object Name	Description	What you can expect to see
Orion Nebula *M42 / NGC 1976 · Orion*	High and well-placed in November evenings. The Trapezium (four central stars easy; fifth and sixth possible), dark bay detail, and Huygens Region all reward careful study in a 10".	
Pleiades *M45 · Taurus*	The most famous naked-eye cluster — high from Oamaru in November. At 40mm the field fills with brilliant blue-white stars and hints of nebulosity around Merope and Alcyone.	
Auriga Clusters *M36, M37, M38 · Auriga*	Three rich open clusters visible in a single wide-field sweep. M37 is the grandest with ~500 stars, M36 youngest and tightest, M38 shows a cross-shaped pattern. A wonderful trio.	
Running Man Nebula *NGC 1977 · Orion*	A blue reflection nebula north of M42 in the same 40mm field. Blue reflection versus M42's green-tinged emission provides a beautiful colour contrast — often overlooked in M42's shadow.	
NGC 1981 *NGC 1981 · Orion*	The open cluster at the top of Orion's sword. Sweep the full sword region with the 40mm to show NGC 1981, the Trapezium, and M42 in context as a single star-forming region.	

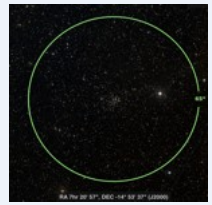
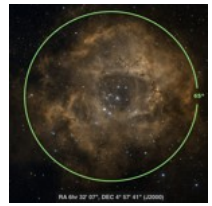
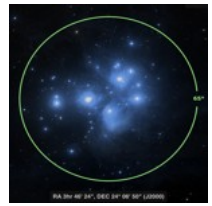
Object Name	Description	What you can expect to see
Rigel (double star) *Beta Orionis · Orion*	A brilliant blue-white supergiant with a 7th-magnitude companion 9 arcsec away — visible in a 10" on good seeing nights despite the primary's overwhelming glare. ~860 ly away.	
NGC 2516 (revisit) *NGC 2516 · Carina*	Back in the east with Carina rising. Over 100 stars in a tight attractive group with a distinctive red giant. A warm-up for the richer Carina targets to come later in the season.	
NGC 1232 *NGC 1232 · Eridanus*	A grand face-on spiral galaxy in Eridanus — bright core clearly detected; averted vision hints at spiral arms. Companion NGC 1232A is visible nearby — a galaxy caught in gravitational interaction.	
Cetus Galaxies *NGC 895 etc · Cetus*	Several accessible galaxies for a November galaxy-hopping session. NGC 895 is a fine face-on spiral. Create a mini galaxy marathon by hopping between 5 or more targets across the constellation.	
Southern Pleiades (revisit) *IC 2602 · Carina*	Carina is back in the evening sky. IC 2602 makes a perfect opening target for the night — a brilliant wide-field object to dark-adapt with before moving to fainter deep-sky targets.	

December

EARLY SUMMER

December sees the southern sky return to its summer configuration. Orion and the Orion Nebula are at their highest from Oamaru, nearly overhead, giving the clearest and most detailed views of the year. Carina and Centaurus rise in the south-east during the evening, and by midnight the Jewel Box and the Eta Carinae Nebula are well placed again. The Large Magellanic Cloud and the Tarantula Nebula within it return to prominence — a fitting way to close the year. Despite the shorter nights of summer, the quality of the objects on offer in December makes every hour at the telescope worthwhile.

Object Name	Description	What you can expect to see
Orion Nebula (prime) *M42 / NGC 1976 · Orion*	At its highest from Oamaru in December — nearly overhead and giving the clearest possible views. The Trapezium, Fish Mouth bay, Huygens Region and outlying gas filaments are all at their finest.	
Tarantula Nebula (peak) *NGC 2070 · Dorado (LMC)*	The LMC is high in December and the Tarantula at its finest. Sweep outward from central star cluster R136 through the sweeping spider-leg arms. On a stable night this is among the most dramatic objects in the sky.	
Beehive Cluster *M44 · Cancer*	Rising in the north-east — over 1,000 stars in a 1.5° field. Use the 40mm and scan through the field; there are multiple double stars embedded within the cluster to find as a bonus.	
Jewel Box (returning) *NGC 4755 · Crux*	Crux rises in the south-east in December evenings. The Jewel Box's return signals summer — share this seasonal marker note with guests before letting the cluster's colours speak.	
NGC 2362 *NGC 2362 · Canis Major*	A compact cluster dominated by the supergiant Tau CMa — one of the most luminous stars known — surrounded by ~60 fainter companions. The contrast between the blazing central giant and the swarm is beautiful.	

Object Name	Description	What you can expect to see
NGC 2360 *NGC 2360 · Canis Major*	After pointing at Sirius (dazzling in a 10"!), move 7° east to this rich open cluster of ~80 stars. The richness of Canis Major's Milky Way provides a sea of faint background stars.	
Rosette Nebula *NGC 2237 · Monoceros*	A vast circular emission nebula surrounding open cluster NGC 2244. The nebula is very low surface brightness — use an OIII filter and wide-field eyepiece. The central star cluster alone is a fine target.	
Sigma Orionis *Sigma Ori · Orion*	A spectacular naked-eye multiple star just south of belt star Alnitak. In a 10" at least five components are visible in a tight grouping — one of the finest multiple star systems for amateur telescopes.	
Pleiades (revisit) *M45 · Taurus*	High in the north-west in December evenings — at their finest from Oamaru. On exceptional nights the nebulosity around Merope and Alcyone is detectable with the 40mm from a dark site.	
Omega Centauri (returning) *NGC 5139 · Centaurus*	Just rising in the south-east by late December — the first hint of the next season's showpiece. Even at low altitude its size and brightness are immediately apparent. The southern year has turned.