Dark Nebulae
Imaging Field Guide

Barnard catalog · Lynds Dark Nebulae

Silhouette targets that need a bright Milky Way background to come alive

Why dark nebulae are different

Dark nebulae are dust clouds that absorb the light from stars behind them — they don't glow on their own. To photograph them you need **a bright background to silhouette against**, which means the Milky Way. This flips most of the conventional imaging wisdom: **broadband instead of narrowband** (no emission line to filter for), **wide field instead of long focal length** (most are large), and **truly dark skies instead of just rural skies** (light pollution destroys the contrast that makes the silhouette readable).

Most rewarding targets are in the summer Milky Way (Sagittarius / Scorpius / Aquila / Cygnus) when the densest star clouds are up. Winter offers fewer but iconic targets (Horsehead, Taurus dust). The Cepheus dust complex is a year-round circumpolar gem from Canadian latitudes.

Imaging difficulty

- ●○○○ **Beginner** · iconic dark shape against bright background, 5–10h, Bortle 5 OK
- ●●○○ **Moderate** · clear silhouette but needs careful processing, 10–18h, Bortle 4–5
- ●●●○ **Advanced** · subtle dust character, faint background, 15–25h, Bortle 4
- ●●●● **Expert** · IFN-class faintness or polar regions, 25+h, Bortle 3 essential

Opacity scale (Barnard's 1–6 system)

- ■□□□□□ **Faint** · barely distinguishable from sky background
- ■■□□□□ **Slight** · noticeable but transparent
- ■■■□□□ **Moderate** · clear silhouette
- ■■■■□□ **Pronounced** · few stars showing through
- ■■■■■□ **Heavy** · nearly opaque
- ■■■■■■ **Totally black** · no stars visible through it (rare)

Quick imaging primer for dark nebulae

Sky brightness

Light pollution kills dark nebula contrast worse than any other target type. Bortle 5 (suburban) is workable for high-opacity targets like B33 Horsehead (which has Hα emission to lean on); broadband-only targets really need Bortle 4 or better. The Polaris Flare and IFN territory needs Bortle 3.

Camera & filter	Mono or color, both work — there's no narrowband shortcut. Anti-light-pollution filters (like NB1) help in suburban skies. Hα filter helps for B33 (which sits in front of IC 434 emission); otherwise standard RGB.
Wide-field framing	Most Barnard targets work better at 200–800mm than at long focal lengths. The Pipe Nebula and Taurus dust complex actually need a 50–135mm camera lens. A wide field captures the dust against the surrounding star clouds — that contrast IS the picture.
Long integration	Dust is faint. Plan 10–25 hours of integration for moderate targets, 30+ for the IFN class. Stack in software like PixInsight or Siril; gentle stretches (HistogramTransformation, ArcsinhStretch) preserve the subtle gradients.
Don't fight the Milky Way	Trying to image dark nebulae from suburban skies fights the basic physics. If you can't travel dark, focus on the high-opacity, small-target subset (B33, B86, B92) where there's still enough contrast to recover.

BARNARD CATALOG OF DARK NEBULAE

Edward Emerson Barnard's classic dark nebula catalog

1927 · 349 objects total

Edward Emerson Barnard (1857–1923) pioneered the photographic study of dark nebulae from Lick and Yerkes Observatories, demonstrating that the dark patches in the Milky Way weren't 'holes' between stars but actual obscuring dust clouds. His *Catalogue of 349 Dark Objects in the Sky* was published posthumously in 1927 and remains the foundational reference. We're including 28 of the most-imaged Barnard objects below — the famous shapes (Horsehead, Snake, E, Pipe) plus several lesser-known but rewarding targets.

B33 · Horsehead Nebula ★ FEATURED

●○○○ BEGINNER

silhouette · Orion · 05h 41m -02° 27' · size 5'×3' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■■■

Imaging **focal** 1000–2000mm · **approach** Hα + RGB; Hα reveals IC 434 background · **integration** 5–10h

Sky Bortle 5 OK with Hα; broadband needs Bortle 4

Notes The most famous dark nebula. Silhouetted against the bright Hα emission of IC 434. Pairs naturally with the Flame Nebula (NGC 2024) in same wide field at 600–800mm.

B72 · Snake Nebula ★ FEATURED

●●○○ MODERATE

silhouette · Ophiuchus · 17h 24m -23° 35' · size 30' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 10–20h

Sky Bortle 4 essential

Notes Distinctive S-shape sinuating through dense star field. Located near rho Oph complex; pair with the Antares region for a stunning rich field. Low altitude from Canada.

B142–B143 · Barnard's E ★ FEATURED

●●○○ MODERATE

silhouette · Aquila · 19h 40m +10° 57' · size 60'×40' · **best Jun–Sep**, meridian Aug

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 300–600mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 5 OK; 4 better

Notes Dark cloud silhouetted against Aquila Milky Way star clouds, shape resembling a capital E. Bright nearby star Tarazed (gamma Aql) anchors the composition. One of the few dark nebulae from northern Canada that gets reasonable altitude.

B59 / B65 / B66 / B67 / B78 · Pipe Nebula complex ★ FEATURED

●○○○ BEGINNER

complex · Ophiuchus · 17h 27m -27° 00' · size 300'×60' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 85–200mm · **approach** Broadband RGB; wide-field DSLR · **integration** 8–15h

Sky Bortle 4 essential

Notes Largest dark nebula complex visible from northern hemisphere — looks like a smoking pipe. Spans 5+ degrees, requires camera lens not telescope. B59 is the stem, B78 the bowl. Best at low southern altitude in summer.

B86 · Inkspot ★ FEATURED

●●○○ MODERATE

silhouette · Sagittarius · 18h 02m -27° 53' · size 5'×4' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■■

Imaging **focal** 1000–2000mm · **approach** Broadband RGB · **integration** 5–10h

Sky Bortle 5 OK

Notes Tiny opaque dark spot within the Sgr Star Cloud (M24 area). Looks like a hole punched in the Milky Way. Bright open cluster NGC 6520 sits adjacent — striking dark/bright contrast in same eyepiece or frame.

B87 · Parrot's Head Nebula

●●●○ ADVANCED

silhouette · Sagittarius · 18h 04m -32° 30' · size 12' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Parrot-profile silhouette in a rich part of the Sagittarius star clouds. Less imaged than the Pipe but rewarding for its distinctive shape.

B92 ★ FEATURED

●○○○ BEGINNER

silhouette · Sagittarius · 18h 15m -18° 11' · size 12'×6' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■■

Imaging **focal** 1000–1800mm · **approach** Broadband RGB · **integration** 5–8h

Sky Bortle 5 OK

Notes Among the most opaque dark nebulae catalogued (rating 6 of 6). Sits inside M24 Sagittarius Star Cloud — the dark patch is unmistakable against the dense star background. Showcase opacity-contrast target.

B93

●●○○ MODERATE

silhouette · Sagittarius · 18h 17m -18° 04' · size 15'×4' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 1000–1800mm · **approach** Broadband RGB · **integration** 5–10h

Sky Bortle 5 OK

Notes Companion to B92 in the M24 region. Together they create a striking dark double; frame both with M24 for stellar field context.

B168 · Cocoon Dark Nebula ★ FEATURED

●●○○ MODERATE

complex · Cygnus · 21h 53m +47° 16' · size 100'×10' · **best Jul–Oct**, meridian Sep

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 300–600mm · **approach** Broadband RGB; emission filter for Cocoon · **integration** 10–20h

Sky Bortle 5 OK

Notes Long thin dark river leading to the Cocoon Nebula (IC 5146). The dust lane is the 'fuse' approaching the bright nebula at one end. Famous combination shot — emission + dark in single frame.

B335

●●●○ ADVANCED

globule · Aquila · 19h 37m +07° 34' · size 2' · **best Jun–Sep**, meridian Aug

Opacity (scale 1–6, 6 = totally opaque) ■■■■■■

Imaging **focal** 1500–2500mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Compact opaque Bok globule — the kind of dark cloud that may be in the process of forming a star. Tiny target needing high focal length and dark skies.

B42

MODERATE

complex · Scorpius · 16h 19m -23° 30' · size 30' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 300–600mm · **approach** Broadband RGB; very long integration · **integration** 15–25h

Sky Bortle 4 essential

Notes Part of the larger rho Ophiuchi / Antares complex — dust intermingled with reflection nebulae. Best framed with the broader Antares region in wide field.

B44

MODERATE

complex · Scorpius · 16h 16m -19° 05' · size 60'×20' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 200–400mm · **approach** Broadband RGB · **integration** 15–25h

Sky Bortle 4 essential

Notes Dark river in the rho Oph dust complex; threads between bright reflection patches. Critical to Antares-region wide-field shots.

B228 · Lupus Dark Cloud

EXPERT

complex · Lupus · 15h 45m -34° 24' · size 240' · **best May–Jul**, meridian Jun

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 85–200mm · **approach** Wide-field DSLR; broadband RGB · **integration** 10–20h

Sky Bortle 3 essential; very low altitude from Canada

Notes Massive dark molecular cloud complex. Very low from Canada (peaks ~5–10° altitude); really only viable from southern US or further south. Listed for completeness.

B361

MODERATE

silhouette · Cygnus · 21h 13m +47° 26' · size 20' · **best Jul–Oct**, meridian Sep

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 600–1200mm · **approach** Broadband RGB · **integration** 8–15h

Sky Bortle 5 OK

Notes Compact dark patch in the Cygnus dust complex. Often imaged adjacent to vdB 141 (Ghost) or B168 (Cocoon dark) in wide framing.

B132

ADVANCED

silhouette · Aquila · 19h 18m +11° 46' · size 20'×6' · **best Jun–Sep**, meridian Aug

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 800–1500mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Dark slash through Aquila star fields. Less famous neighbor of Barnard's E; together they show the rich dust content of this Milky Way region.

B175

ADVANCED

complex · Cepheus · 22h 27m +72° 47' · size 60' · **best Aug–Nov**, meridian Oct

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 300–600mm · **approach** Broadband RGB; long integration · **integration** 15–25h

Sky Bortle 4 essential

Notes Part of the Cepheus dust nebula complex. Subtle silhouette work; rewards methodical processing. Often imaged with surrounding LBN regions.

B252

ADVANCED

silhouette · Cygnus · 20h 14m +39° 54' · size 30' · **best Jul–Oct**, meridian Sep

Opacity (scale 1–6, 6 = totally opaque)

Imaging **focal** 600–1000mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 5 OK

Notes Dark patch in dense Cygnus star fields — dark contrast against a star-rich background is the appeal. Subtle target rewards image processing skill.

B27

ADVANCED

silhouette · Lyra · 18h 27m +02° 42' · size 15' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque)

Imaging **focal** 800–1500mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Dark patch in Lyra/Aquila border. Less commonly imaged; appeals to dark-nebula completists looking beyond the famous big names.

B29

ADVANCED

silhouette · Aquila · 18h 30m -04° 50' · size 12' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque)

Imaging **focal** 1000–1500mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Compact dark spot in Aquila; clean silhouette against dense star background. Pairs with brighter B30 if you can pull it in same frame.

B238

ADVANCED

silhouette · Sagittarius · 18h 38m -08° 18' · size 30' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque)

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Dark cloud in the Scutum region of the Milky Way. Adjacent to M11 Wild Duck Cluster — beautiful contrast composition with the densely-packed cluster.

B22 · Taurus Dark Clouds ★ FEATURED

ADVANCED

complex · Taurus · 04h 32m +24° 18' · size 180' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque)

Imaging **focal** 85–200mm · **approach** Wide-field DSLR; broadband RGB · **integration** 15–25h

Sky Bortle 4 essential

Notes Vast dark molecular cloud complex stretching across Taurus — known as 'Taurus Molecular Cloud'. Subtle dust ribbons visible in long-exposure wide field. Surrounded by Pleiades, Hyades, California Nebula for context.

B7

ADVANCED

silhouette · Taurus · 04h 18m +28° 26' · size 20' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque)

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Dark patch in the broader Taurus dust complex. Often included in Pleiades wide-field shots since it sits a few degrees east of M45.

B5

ADVANCED

silhouette · Perseus · 03h 47m +32° 54' · size 15' · **best Oct–Jan**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 800–1500mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 4 essential

Notes Within the Perseus molecular cloud — region of active star formation. Dark patch visible against star-rich background.

B30 / B31 / B32 · Lambda Orionis dark clouds

ADVANCED

complex · Orion · 05h 32m +12° 30' · size 120' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■□□□

Imaging **focal** 200–400mm · **approach** Wide-field DSLR; broadband RGB · **integration** 15–25h

Sky Bortle 4 essential

Notes Dark cloud arc partially encircling the Lambda Orionis emission ring (Sh2-264). Complex of subtle dark patches — wide framing reveals the relationship to the surrounding Hα ring.

B92 / B93 region · M24 Star Cloud darks ★ FEATURED

BEGINNER

complex · Sagittarius · 18h 16m -18° 30' · size 30' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 5–10h

Sky Bortle 5 OK

Notes When framed wider, B92 + B93 + several smaller darks within M24 create a dramatic 'islands of darkness in a sea of stars' composition. One of the most photogenic dark-nebula scenes in the sky.

B41

ADVANCED

complex · Scorpius · 16h 26m -26° 26' · size 60' · **best Jun–Aug**, meridian Jul

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 300–600mm · **approach** Broadband RGB; long integration · **integration** 15–25h

Sky Bortle 4 essential

Notes Major dust complex around Antares — closely associated with B42, B44 in same field. Fills the gap between bright reflection nebulae IC 4604/IC 4605.

B26

EXPERT

silhouette · Auriga/Taurus · 04h 38m +25° 23' · size 10' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 1000–1800mm · **approach** Broadband RGB · **integration** 15–25h

Sky Bortle 4 essential

Notes Compact dark patch in Taurus dust complex. Subtle, requires good processing to bring out against background. Less imaged than its bigger neighbors.

B164

ADVANCED

silhouette · Cepheus · 21h 03m +68° 13' · size 30' · **best Jul–Nov**, meridian Sep

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 600–1000mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 5 OK

Notes In the Cepheus dust complex with the famous LDN 1235 Dark Shark nearby. Often co-imaged in wide-field northern dust mosaics.

LYNDS DARK NEBULAE — SELECTED

Beverly Lynds' modern dark nebula catalog (subset)

1962 · 1,802 objects total

Beverly Lynds compiled a far larger catalog of 1,802 dark nebulae from the Palomar Observatory Sky Survey plates in 1962 — many of which Barnard had missed or could only document partially with earlier photographic technology. We're including 10 LDN highlights that aren't in the Barnard catalog: the famous Boogeyman (LDN 1622), the Dark Shark (LDN 1235) and other Cepheus dust complex members, plus the elusive Polaris Flare (LDN 134) — one of the toughest visible targets in the sky.

LDN 1622 · Boogeyman Nebula ★ FEATURED

●●○○ MODERATE

silhouette · Orion · 05h 54m +01° 47' · size 20'×10' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■■■

Imaging **focal** 500–1000mm · **approach** Broadband RGB; long integration · **integration** 15–25h

Sky Bortle 4 essential

Notes Eerie figure-shape dark cloud in eastern Orion. The 'Boogeyman' nickname comes from the unsettling humanoid silhouette. Sits in the broader Sh2-265 emission region — frame both for dramatic dark+emission composition.

LDN 1471

●●●○ ADVANCED

complex · Perseus · 04h 02m +30° 48' · size 15' · **best Oct–Jan**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 800–1500mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 4 essential

Notes Active star-forming dark cloud in the Perseus molecular cloud. Embedded young stellar objects illuminate parts of the cloud — subtle reflection within the dark.

LDN 1235 · Dark Shark Nebula ★ FEATURED

●●●○ ADVANCED

silhouette · Cepheus · 22h 04m +73° 25' · size 30'×15' · **best Aug–Nov**, meridian Oct

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 500–1000mm · **approach** Broadband RGB; long integration · **integration** 15–25h

Sky Bortle 4 essential

Notes Iconic shark-silhouette dark cloud in northern Cepheus. Pair with vdB 152 (Wolf's Cave) in same wide field for one of the most rewarding dust compositions of the year. Circumpolar from Canada.

LDN 1251

●●●○ ADVANCED

complex · Cepheus · 22h 38m +75° 12' · size 30' · **best Aug–Nov**, meridian Oct

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 15–25h

Sky Bortle 4 essential

Notes Northern Cepheus dust complex with embedded young stars. Subtle reflection patches within the dark cloud. Companion target to LDN 1235.

LDN 134 · Polaris Flare region

EXPERT

complex · Camelopardalis/UMi · 15h 53m -04° 35' · size 240' · **best Year-round (circumpolar)**, meridian All

Opacity (scale 1–6, 6 = totally opaque) ■■■□□□

Imaging **focal** 85–200mm · **approach** Wide-field DSLR; very long integration · **integration** 20–40h

Sky Bortle 3 essential

Notes Vast diffuse high-latitude dust complex visible near Polaris (the 'Polaris Flare'). Extremely faint integrated flux nebula territory; rewards 30+ hours of broadband integration. One of the most challenging dark-nebula targets visible.

LDN 673

ADVANCED

complex · Aquila · 19h 21m +11° 13' · size 20' · **best Jun–Sep**, meridian Aug

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 600–1200mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 4 essential

Notes Dark cloud in the Aquila Rift region — the dust band that splits the summer Milky Way. Dense opacity against star-rich background.

LDN 988

ADVANCED

silhouette · Cygnus · 21h 02m +50° 17' · size 30' · **best Jul–Oct**, meridian Sep

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 400–800mm · **approach** Broadband RGB · **integration** 10–15h

Sky Bortle 5 OK

Notes Dark cloud in northern Cygnus. Often featured in wide-field captures of the Cygnus dust complex alongside vdB 141 (Ghost) and B168 (Cocoon dark).

LDN 1551

ADVANCED

complex · Taurus · 04h 31m +18° 08' · size 20' · **best Nov–Feb**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 800–1500mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 4 essential

Notes Active star-forming region within the Taurus molecular cloud. Embedded protostars produce small reflection nebulae and Herbig-Haro objects within the broader dark cloud.

LDN 1455

ADVANCED

silhouette · Perseus · 03h 27m +30° 12' · size 15' · **best Oct–Jan**, meridian Dec

Opacity (scale 1–6, 6 = totally opaque) ■■■■■□

Imaging **focal** 800–1500mm · **approach** Broadband RGB · **integration** 10–18h

Sky Bortle 4 essential

Notes Compact dark cloud in the western Perseus molecular complex. Pairs with the IC 348 reflection nebula in same wider field.

LDN 1773

ADVANCED

silhouette · Cepheus · 21h 14m +68° 16' · size 30' · **best Jul–Nov**, meridian Sep

Opacity (scale 1–6, 6 = totally opaque) ■■■■□□

Imaging **focal** 500–1000mm · **approach** Broadband RGB · **integration** 15–25h

Sky Bortle 4 essential

Notes Within the broader Cepheus dust complex; often co-imaged with vdB 141 (Ghost) and Wolf's Cave. Subtle dust silhouette against fainter background star field.