Caldwell catalogue

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The Caldwell Catalogue is an astronomical catalog of 109 bright star clusters, nebulae, and galaxies for observation by amateur astronomers. The list was compiled by Sir Patrick Caldwell-Moore, better known as Patrick Moore, as a complement to the Messier Catalogue.

The Messier Catalogue is used frequently by amateur astronomers as a list of interesting deep-sky objects for observations, but Moore noted that the list did not include many of the sky's brightest deep-sky objects, including the Hyades, the Double Cluster (NGC 869 and NGC 884), and NGC 253. Moreover, Moore observed that the Messier Catalogue, which was compiled based on observations in the Northern Hemisphere, excluded bright deep-sky objects visible in the Southern Hemisphere such as Omega Centauri, Centaurus A, the Jewel Box, and 47 Tucanae.[1][2] He quickly compiled a list of 109 objects (to match the number of objects in the Messier Catalogue) and published it in Sky & Telescope in December 1995.[3]

Since its publication, the catalogue has grown in popularity and usage within the amateur astronomical community. Small compilation errors in the original 1995 version of the list have since been corrected. Unusually, Moore used one of his surnames to name the list, and the catalogue adopts "C" numbers to rename objects with more common designations.[4]

As stated above, the list was compiled from objects already identified by professional astronomers and commonly observed by amateur astronomers. Unlike objects in the Messier catalogue, which are listed in the order they were discovered, the Caldwell catalogue is ordered by declination, with C1 being the most northerly and C109 being the most southerly, although two objects (NGC 4244 and the Hyades) are listed out of sequence.[1] The original list also incorrectly identified S Norma Cluster (NGC 6087) as NGC 6067 and incorrectly labelled the Lambda Centauri Cluster (IC 2944) as the Gamma Centauri Cluster.[1]

A natural progression for the amateur astronomer wishing to observe deep sky objects would be to view the Messier catalogue, followed by the Caldwell catalogue, and then the Herschel 400 Catalogue. At the end of this exercise the observer would have viewed nearly 600 objects. Although there are 618 objects listed in these three catalogues the Herschel 400 Catalogue does contain some objects from the Messier and Caldwell catalogues.

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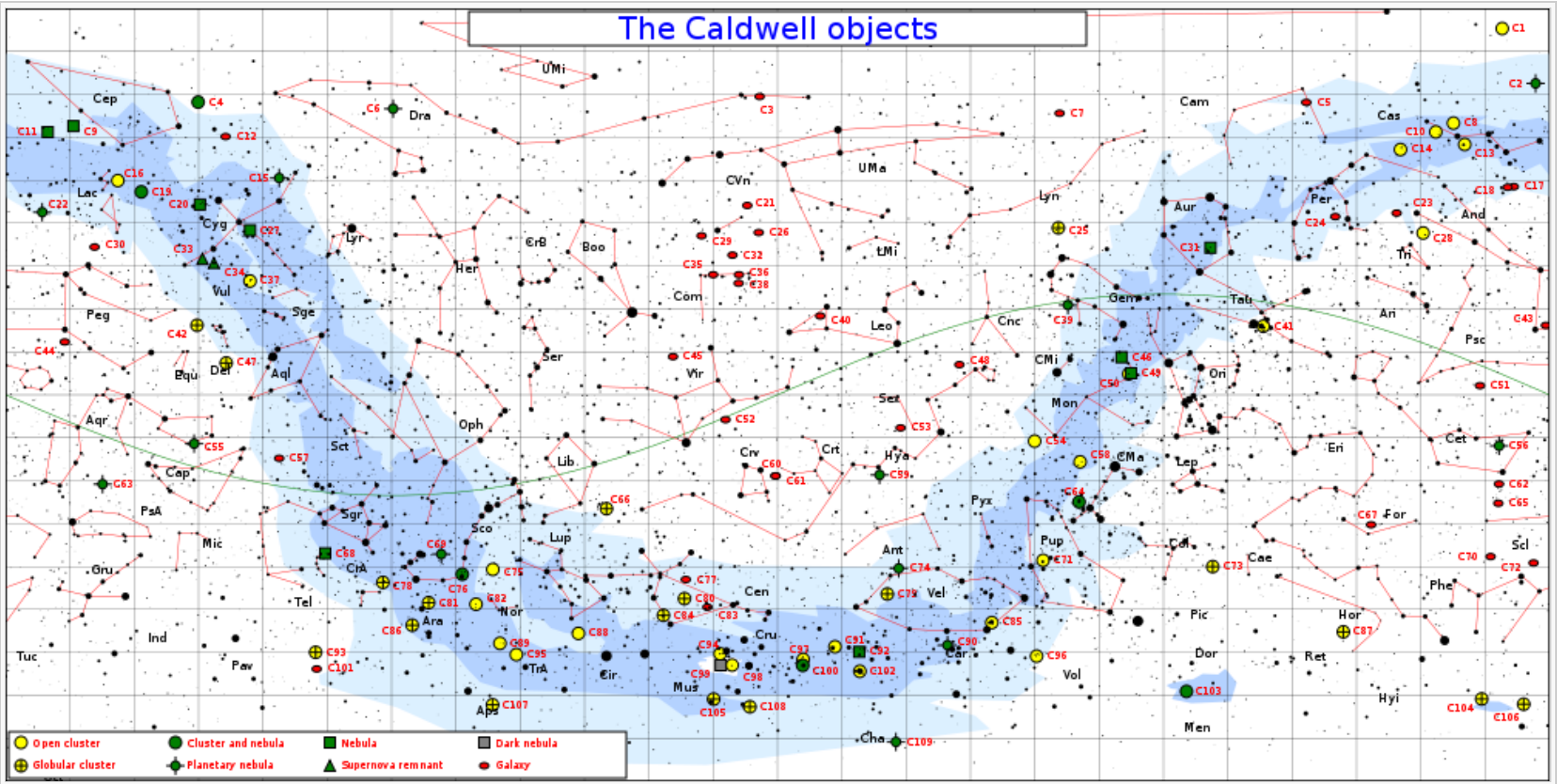


Caldwell Star Chart

Number of objects by type in the Caldwell catalogue. [edit]

Dark nebulae	1
Galaxy	35
Globular clusters	18
Nebulae	9
Star Clusters	25
Star Clusters and Nebulae	6
Planetary Nebulae	13
Supernova remnant	2
Total	109

Caldwell objects [edit]

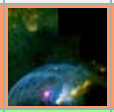
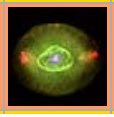
Key [edit]

Star cluster
Nebula
Galaxy

1-10 [edit]

Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C1	NGC 188			Open Cluster	4.8	Cepheus	8.1
C2	NGC 40	*Bow-Tie Nebula*		Planetary Nebula	3.5	Cepheus	11
C3	NGC 4236			Galaxy	7,000	Draco	9.7
C4	NGC 7023	*Iris Nebula*		Open Cluster and Nebula	1.4	Cepheus	7
C5	IC 342			Galaxy	13,000	Camelopardalis	9
C6	NGC 6543	*Cat's Eye Nebula*		Planetary Nebula	3	Draco	9
C7	NGC 2403			Galaxy	14,000	Camelopardalis	8.4
C8	NGC 559			Open Cluster	3.7	Cassiopeia	9.5
C9	Sh2-155	*Cave Nebula*		Nebula	2.8	Cepheus	-
C10	NGC 663			Open Cluster	7.2	Cassiopeia	7.1

11-20 [edit]

Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C11	NGC 7635	*Bubble nebula*		Nebula	7.1	Cassiopeia	-
C12	NGC 6946			Galaxy	18,000	Cepheus	8.9
C13	NGC 457	*Owl Cluster, E.T. Cluster*		Open Cluster	-	Cassiopeia	6.4
C14	NGC 869 & NGC 884	*Double Cluster, H & χ Persei*		Open Cluster	7.3	Perseus	4
C15	NGC 6826	*Blinking Planetary*		Planetary Nebula	2.2	Cygnus	10

C16	NGC 7243			Open Cluster	2.5	Lacerta	6.4
C17	NGC 147			Galaxy	2,300	Cassiopeia	9.3
C18	NGC 185			Galaxy	2,300	Cassiopeia	9.2
C19	IC 5146	*Cocoon Nebula*		Open Cluster and Nebula	3.3	Cygnus	7.2
C20	NGC 7000	*North America Nebula*		Nebula	1.8	Cygnus	-

21-30

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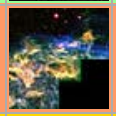
Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C21	NGC 4449			Galaxy	10,000	Canes Venatici	9.4
C22	NGC 7662	*Blue Snowball*		Planetary Nebula	3.2	Andromeda	9
C23	NGC 891			Galaxy	31,000	Andromeda	10
C24	NGC 1275	*Perseus A*		Galaxy	230,000	Perseus	11.6
C25	NGC 2419			Globular Cluster	275	Lynx	10.4
C26	NGC 4244			Galaxy	10,000	Canes Venatici	10.2
C27	NGC 6888	*Crescent Nebula*		Nebula	4.7	Cygnus	7.4
C28	NGC 752			Open Cluster	1.2	Andromeda	5.7
C29	NGC 5005			Galaxy	69,000	Canes Venatici	9.8
C30	NGC 7331			Galaxy	47,000	Pegasus	9.5

31-40

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Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C31	IC 405	*Flaming Star Nebula*		Nebula	1.6	Auriga	-
C32	NGC 4631	*Whale Galaxy*		Galaxy	22,000	Canes Venatici	9.3
C33	NGC 6992	*Veil Nebula*		Supernova Remnant	2.5	Cygnus	-
C34	NGC 6960	*Veil Nebula*		Supernova Remnant	2.5	Cygnus	-
C35	NGC 4889			Galaxy	300,000	Coma Berenices	11.4
C36	NGC 4559			Galaxy	32,000	Coma Berenices	9.9
C37	NGC 6885			Open Cluster	1.95	Vulpecula	6
C38	NGC 4565	*Needle Galaxy*		Galaxy	32,000	Coma Berenices	9.6
C39	NGC 2392	*Eskimo Nebula*/*Clown Face Nebula*		Planetary Nebula	4	Gemini	10
C40	NGC 3626			Galaxy	86,000	Leo	10.9

41-50

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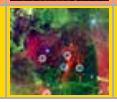
Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C41	Mel25	*Hyades*		Open Cluster	0.151	Taurus	0.5
C42	NGC 7006			Globular Cluster	135	Delphinus	10.6
C43	NGC 7814			Galaxy	49,000	Pegasus	10.5
C44	NGC 7479			Galaxy	106,000	Pegasus	11
C45	NGC 5248			Galaxy	74,000	Boötes	10.2
C46	NGC 2261	*Hubble's Variable*		Nebula	2.5	Monoceros	-

		Nebula					
C47	NGC 6934			Globular Cluster	57	Delphinus	8.9
C48	NGC 2775			Galaxy	55,000	Cancer	10.3
C49	NGC 2237	*Rosette Nebula*		Nebula	4.9	Monoceros	9.0
C50	NGC 2244			Open Cluster	4.9	Monoceros	4.8

51-60

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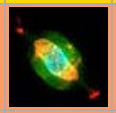
Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C51	IC 1613			Galaxy	2,300	Cetus	9.3
C52	NGC 4697			Galaxy	76,000	Virgo	9.3
C53	NGC 3115	*Spindle Galaxy*		Galaxy	22,000	Sextans	9.2
C54	NGC 2506			Open Cluster	10	Monoceros	7.6
C55	NGC 7009	*Saturn Nebula*		Planetary Nebula	1.4	Aquarius	8
C56	NGC 246			Planetary Nebula	1.6	Cetus	8
C57	NGC 6822	*Barnard's Galaxy*		Galaxy	2,300	Sagittarius	9
C58	NGC 2360			Open Cluster	3.7	Canis Major	7.2
C59	NGC 3242	*Ghost of Jupiter*		Planetary Nebula	1.4	Hydra	9
C60	NGC 4038	*Antennae Galaxies*		Galaxy	83,000	Corvus	10.7

61-70

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Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C61	NGC 4039	*Antennae Galaxies*		Galaxy	83,000	Corvus	13
C62	NGC 247			Galaxy	6,800	Cetus	8.9

C63	NGC 7293	*Helix Nebula*		Planetary Nebula	0.522	Aquarius	7.3
C64	NGC 2362			Open Cluster and Nebula	5.1	Canis Major	4.1
C65	NGC 253	*Sculptor Galaxy/Silver Coin Galaxy*		Galaxy	9,800	Sculptor	7.1
C66	NGC 5694			Globular Cluster	113	Hydra	10.2
C67	NGC 1097			Galaxy	47,000	Fornax	9.3
C68	NGC 6729			Nebula	0.424	Corona Australis	-
C69	NGC 6302	*Bug Nebula*		Planetary Nebula	5.2	Scorpius	13
C70	NGC 300			Galaxy	3,900	Sculptor	9

71-80

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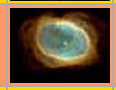
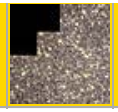
Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C71	NGC 2477			Open Cluster	3.7	Puppis	5.8
C72	NGC 55			Galaxy	4,200	Sculptor	8
C73	NGC 1851			Globular Cluster	39.4	Columba	7.3
C74	NGC 3132	*Eight Burst Nebula*		Planetary Nebula	2	Vela	8
C75	NGC 6124			Open Cluster	1.5	Scorpius	5.8
C76	NGC 6231			Open Cluster and Nebula	6	Scorpius	2.6
C77	NGC 5128	*Centaurus A*		Galaxy	16,000	Centaurus	7
C78	NGC 6541			Globular Cluster	22.3	Corona Australis	6.6
C79	NGC 3201			Globular Cluster	17	Vela	6.8

C80	NGC 5139	*Omega Centauri*		Globular Cluster	17.3		Centaurus	3.7

81-90

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Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C81	NGC 6352			Globular Cluster	18.6	Ara	8.2
C82	NGC 6193			Open Cluster	4.3	Ara	5.2
C83	NGC 4945			Galaxy	17,000	Centaurus	9
C84	NGC 5286			Globular Cluster	36	Centaurus	7.6
C85	IC 2391	*Omicron Vel Cluster*		Open Cluster	0.5	Vela	2.5
C86	NGC 6397			Globular Cluster	7.5	Ara	5.7
C87	NGC 1261			Globular Cluster	55.5	Horologium	8.4
C88	NGC 5823			Open Cluster	3.4	Circinus	7.9
C89	NGC 6087 (mistakenly written as NGC 6067 in the original, but description is that of NGC 6087)	*S Norma Cluster*		Open Cluster	3.3	Norma	5.4
C90	NGC 2867			Planetary Nebula	5.5	Carina	10

91-100

[edit]

Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C91	NGC 3532			Open Cluster	1.6	Carina	3
C92	NGC 3372	*Eta Carinae Nebula*		Nebula	7.5	Carina	-
C93	NGC 6752			Globular Cluster	13	Pavo	5.4
C94	NGC 4755	*Jewel Box*		Open Cluster	4.9	Crux	4.2
						Triangulum	

C95	NGC 6025			Open Cluster	2.5	Australe	5.1
C96	NGC 2516			Open Cluster	1.3	Carina	3.8
C97	NGC 3766			Open Cluster	5.8	Centaurus	5.3
C98	NGC 4609			Open Cluster	4.2	Crux	6.9
C99	-	*Coalsack Nebula*		Dark Nebula	0.61	Crux	-
C100	IC 2944	*Lambda Centauri Nebula*		Open Cluster and Nebula	6	Centaurus	4.5

101-109

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Caldwell number	NGC number	Common name	Picture	Object type	Distance to object in thousands of light years	Constellation	Apparent magnitude
C101	NGC 6744			Galaxy	34,000	Pavo	9
C102	IC 2602	*Theta Car Cluster*		Open Cluster	0.492	Carina	1.9
C103	NGC 2070	*Tarantula Nebula*		Open Cluster and Nebula	170	Dorado	8.2
C104	NGC 362			Globular Cluster	27.7	Tucana	6.6
C105	NGC 4833			Globular Cluster	19.6	Musca	7.4
C106	NGC 104	*47 Tucanae*		Globular Cluster	14.7	Tucana	4
C107	NGC 6101			Globular Cluster	49.9	Apus	9.3
C108	NGC 4372			Globular Cluster	18.9	Musca	7.8
C109	NGC 3195			Planetary Nebula	5.4	Chamaeleon	-

See also

[edit]

- Messier Catalogue
- Herschel 400 Catalogue
- New General Catalogue (NGC)

Book: Caldwell catalogue

Wikipedia Books are collections of articles that can

- Index Catalogue (IC)
- Revised New General Catalogue (RNGC)
- Revised Index Catalogue (RIC)

be downloaded or ordered in print.

References [edit]

1. ^ [a] [b] [c] O'Meara, Stephen James (2002). *The Caldwell Objects*. Cambridge University Press. ISBN 978-0-521-82796-6.
2. ^ "Caldwell Club Introduction". Retrieved 2006-09-08.
3. ^ Moore, Patrick (December 1995) (subscription required). *Beyond Messier: The Caldwell Catalog*. Sky & Telescope. pp. 38. Retrieved 2006-08-29.[*dead link*]
4. ^ Mobberley, Martin (2009). *The Caldwell Objects and How to Observe Them*. Springer. ISBN 978-1-4419-0325-9.

External links [edit]

- The Caldwell Catalogue at SEDS
- The Caldwell Club
- Caldwell Star Charts, Images and more
- Searchable Caldwell Catalogue list
- Clickable Caldwell Object table

Wikimedia Commons has media related to: ***Caldwell objects***

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