

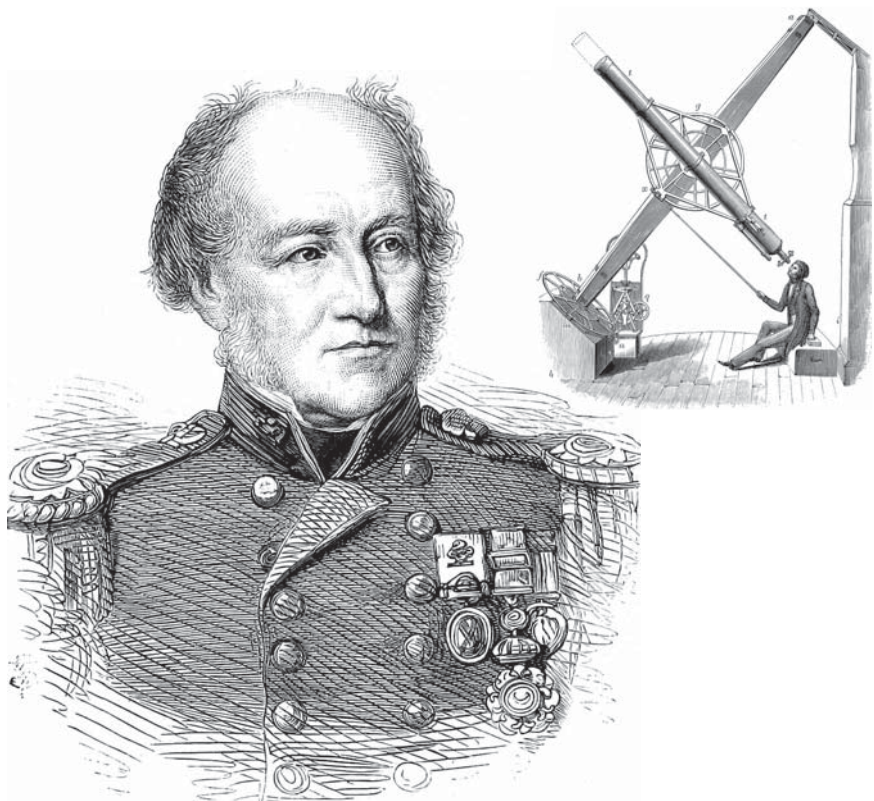
Table of Contents

Introduction	vii
Acknowledgments	xi
Centaurus	1
Notable Stars in Centaurus	10
Rigil Kentaurus, Alpha (α) Centauri	10
Observational History	13
The Rigil Kentaurus (Alpha Centauri) System	17
Motion toward the Sun	22
The Purported Planet Orbiting Alpha Centauri B	23
A Sample of Exoplanets in Centaurus	26
The Not-so-purported Planet Orbiting Proxima Centauri	27
Alpha Centauri's End Game	29
A Neighboring Supernova	30
Hadar, Beta (β) Centauri	30
Muhlifain, Gamma (γ) Centauri	34
Delta (δ) Centauri	37
Epsilon (ϵ) Centauri	39
Omega (ω) Centauri	40
R Centauri	40
T Centauri	43
Galactic Objects	47
Scorpius-Centaurus Association	47
Sco OB2 Supernovae	53
NGC 5367	57
NGC 3918	61
NGC 5617 (with Pismis 19, NGC 5662, and NGC 5460)	65
NGC 5139	68
Overview of Observational History	72
Omega Centauri's Anomalous Traits	74
Evidence for and against a Central Black Hole	77
The Orbit of Omega Centauri	79
NGC 5286	81
Extragalactic Objects	85
NGC 5253	85
Early Investigations	89
A Starburst Galaxy in the Neighborhood	93
NGC 5102	98
NGC 5128	106
Early Astronomical Observations	111

Radio Lobes, Jet, and Active Nucleus	117
The Return of the Merger Scenario	123
Globular Cluster Population	125
NGC 5128/Centaurus A Today: An Overview	133
NGC 4945	139
The Centaurus Cluster of Galaxies	146
NGC 4696	146
Looking toward Centaurus through the Milky Way	151
Looking through Centaurus: The Extragalactic View	152
Cepheus	155
Notable Stars in Cepheus	159
Alderamin, Alpha (α) Cephei	159
Alfirk, Beta (β) Cephei	162
Errai, Gamma (γ) Cephei	163
Delta (δ) Cephei	165
Epsilon (ϵ) Cephei	176
Mu (μ) Cephei	179
The Purkinje Effect: Seeing Red	189
Xi (ξ) Cephei	191
Krüger 60AB	192
S Cephei	195
U Cephei	200
EE Cephei	205
VV Cephei	209
Σ 2816	212
Galactic Objects	212
NGC 7023	212
NGC 7160	221
IC 1396	224
NGC 7380, Sh 2-155, and NGC 7822	236
NGC 7538 and NGC 7510	242
NGC 188	244
NGC 40	251
Extragalactic Objects	257
NGC 6951	257
NGC 2300 and NGC 2276	263
NGC 6946	268
Looking toward Cepheus through the Milky Way	278
Looking through Cepheus: The Extragalactic View	279
Cetus	281
Notable Stars in Cetus	288
Menkar, Alpha (α) Ceti	288
Deneb Kaitos, Beta (β) Ceti	291

TABLE OF CONTENTS

Gamma (γ) Ceti	293
Mira, Omicron (\omicron) Ceti	295
Discovery	297
Mira Stars in General	302
Mira in Particular	303
Mira's Environment	305
The Companion	308
Tau (τ) Ceti	310
Reflections on Project Ozma	316
Luyten 726-8	327
A Sample of Exoplanets in Cetus	330
Galactic Objects	332
NGC 246	332
NGC 7826	338
Extragalactic Objects	339
IC 1613	339
NGC 247	342
NGC 45	347
NGC 1055	353
M77	355
Isaac Roberts and the Dawn of Modern Astrophotography	367
NGC 908	376
NGC 157	378
Figure Acknowledgments	387
Index	395



Dedicated to Admiral William Henry Smyth (1788–1865). He pursued a long career with the Royal Navy, earning the rank of Vice Admiral after his retirement in 1846. In 1825, he established a private observatory in Bedford, England, equipped with a 5.9-inch refractor (upper right), where he vigorously made astronomical observations for the next 14 years. He published his observing notes in 1844 in *Cycle of Celestial Objects* and its most famous second volume, *The Bedford Catalogue*. In addition to his astronomical work, Smyth studied, translated, and published works on diverse topics including naval history, antiquarian artifacts, numismatics, geography, and travel. His obituary in the *Monthly Notices of the Royal Astronomical Society* observed: “As President of the Astronomical Club, he was always genial & courteous, ever keeping things in happy order, and by his ready wit and flow of humour compelling the maintenance of good fellowship.” Portrait credit Smyth’s obituary in the *Illustrated London News*, 1865; telescope image is from *A Handbook of Descriptive and Practical Astronomy Volume 2* (1892), by George Chambers.