

# Contents

Preface.....	vii
Acknowledgements.....	ix
1 Unsung Little Worlds.....	1
Piazzini's Moving "Star" ... and Its Many Companions .....	1
Trojans, Amors, Apollos ... and Other Wandering Asteroids.....	6
Potentially Dangerous Asteroids (But Not Too Much to Worry About!).....	12
Asteroid Families, Groups and Pairs.....	13
Light and Dark Asteroids.....	15
Vesta—The Brightest Asteroid .....	17
Ceres: Asteroid, Low-Activity Comet or Dwarf Planet (or All Three!)? .....	23
Far-Flung Mini Planets of the Outer Solar System .....	28
Mini Lands Beyond Neptune; the Kuiper Belt and Beyond .....	33
A Weird World Called Sedna .....	35
The Sword of Damocles!.....	40
2 Weird Objects with Split Personalities .....	43
Asteroids Behaving Like Comets .....	43
Comet Elst-Pizarro and Its Relatives .....	48
Colliding Asteroids and "Temporary Comets" .....	50
Rotational Instability as a Cause of "Cometary" Activity in Asteroids.....	55
Tidal Heating and Comet-like Behavior .....	60
The Weird Geminid Parent.....	60
The Mysterious 322P/SOHO.....	68
Comets Behaving Like Asteroids .....	74
"Ghost Comets"? .....	86
	xi

3	Comet Oddities: Different Objects Sharing the Same Orbit .....	93
	Comet Groups .....	94
	Sungrazers and Sunskirters.....	101
	The Mysterious Object of 1921: Did It Have a Sibling? .....	116
	The Earth-Grazers of 2016.....	124
4	More Comet Oddities: Outbursts, Disruptions and Other Strange Behavior .....	127
	The Weird Tale of Comet Holmes .....	127
	The “Gas Outbursts” of Comet Tuttle-Giacobini-Kresák .....	138
	29P/Schwassmann-Wachmann; A Volcanic Comet? .....	141
	15P/Finlay; A Phoenix Comet? .....	148
	Outbursts of Longer-Period Comets .....	154
	Lopsided Lightcurves, “Tail Flares” and Other Unexpected Behavior .....	157
	Two Long-Period Comets Acting Strangely.....	165
	The Little Comet That Flew to Pieces.....	168
	Comet Landslides and Avalanches.....	171
	Vanishing Comets .....	174
	“Brigadoon” Comets .....	191
	Weird Tail Behavior.....	193
5	The Fascinating Taurid Complex.....	201
	Was Encke a “Chimera” Comet? .....	213
	A Second (Related?) Asteroid/Meteor/ Comet Complex?! .....	217
	A Very Young Meteorite: Is it a Piece of Comet Encke? ....	232
	Fireball Concentrations Within the Taurid Complex .....	236
	An Oort-Cloud Comet Invades the Taurid Complex? .....	238
	Comet Encke in Ancient Times.....	240
	Some Unusual Events and the Taurid Complex: Is There a Connection? .....	242
6	The Mice That Roared!.....	249
	Appendix A.....	259
	Appendix B .....	263

Glossary .....	265
Author Index .....	271
Subject Index .....	275



<http://www.springer.com/978-3-319-56557-6>

Weird Comets and Asteroids

The Strange Little Worlds of the Sun's Family

Seargent, D.A.J.

2017, XIII, 279 p. 45 illus., 28 illus. in color., Softcover

ISBN: 978-3-319-56557-6