

Contents

List of Illustrations xxv

Colour Plates xxvii

Steno’s Scientific Life in a Nutshell (1638–1677) 1

Steno as Bishop (1677–1686): Summary of “Gustav Scherz, Niels Stensen, Vol. 2” 3

Part I Biography of Nicolaus Steno by Gustav Scherz, translated by Paul Maquet

1 Childhood and Youth in Copenhagen, 1638–1659 7

1.1 Genealogy and Family 7

1.2 Childhood Years 14

1.3 At Our Lady’s School 26

1.4 University Years 1656–1659 40

2 Years of Discovery in Holland, 1660–1664 61

2.1 In Amsterdam 63

2.2 Research on Glands in Leiden 67

2.3 A Holiday Journey to North Holland 76

2.4 Two Fruitful Years of Work 81

2.5 Mathematics and Research on Muscles. 85

2.6 Journey Through Belgium, 1663 96

2.7 Departure from Holland 102

2.8 Back Home and Disappointments, 1664 108

3 In Paris and France, 1664–1665 115

3.1 On to Paris 115

3.2 Participant in the Life of the Learned 121

3.3	Stensen and Catholic Paris	133
3.4	Journey in France in the Autumn of 1665	136
4	The First Year in Italy	141
4.1	In the Circle of the Grand Duke Ferdinand, Early 1666	141
4.2	First Visit to Rome in May/June 1666	152
4.3	Studies on Muscles in Tuscany	157
4.4	The Huge Shark, Autumn 1666	166
5	Researcher and Convert, in Italy 1667	173
5.1	Embryology and Geology	173
5.2	Stensen's Conversion	185
6	The Geological Dissertation the <i>Prodromus on a Solid Within a Solid</i>, in Italy 1668	203
6.1	Preliminary Geological Studies	203
6.2	On a Solid Within a Solid	209
6.3	The Scientific Value of the Treatise	218
6.4	Remembrance in Posterity	222
7	The Great Travel, 1668–1670	235
7.1	Through Italy	236
7.2	The Travelling Geologist in Central Europe	242
7.3	Defender of Catholicism in Holland in 1670	247
8	Under Cosimo III, In Florence	255
8.1	Theological Writer	257
8.2	Geologist of the Grand Duke	273
8.3	Departure, Beginning 1672	281
9	The Two Years in Copenhagen, 1672–1674	287
9.1	Copenhagen 1672	287
9.2	Royal Anatomist	292
9.3	Amongst Catholics in Denmark	310
9.4	Departure from Denmark	318
10	Educator and Priest in Florence, 1675–1677	325
10.1	Teacher to the Prince	325
10.2	Priest and Missionary	328
10.3	The Former Scientist	338

Part II Steno – Scientific Papers – OPH

Scientific Disputation on the Subject of Hot Springs	347
I On the First Discovery of an External Salivary Duct and on the Experiments of Bils	353
<i>De Prima Ductus Salivalis Exterioris Inventione & Bilsianis Experimentis</i>	
II On The Glands of the Mouth and the New Salivary Ducts Proceeding from Them	359
<i>De Glandulis Oris & Novis Inde Prodeuntibus Salivae Vasis</i>	
III Various New Observations in the Eyes and Nose, Etc.	391
<i>Variae in Oculis & Naso Observationes Novae & C.</i>	
IV Response to Vindications for Rehabilitation of the Liver	395
<i>Responsio ad Vindicias Hepatis Redivivi</i>	
V Anatomical Observations on the Glands of the Eyes	407
<i>De Glandulis Oculorum Novisque Earundem Vasis Observationes Anatomicae</i>	
VI On Vessels of the Nose	417
<i>De Narium Vasis</i>	
VII Origin of Sweat from Glands. On the Insertion and Valvula of the Thoracic Duct and of the Lymphatics	421
<i>Sudorum Origo ex Glandulis. De Insertione & Valvula Lactei Thoracici & Lymphaticorum</i>	
VIII Why Tobacco Powder Makes the Eyes Clearer. Observation on a Milky Gelatin	425
<i>Cur Nicotianae Pulvis Oculos Clariores Reddat. De Lactea Gelatina Observatio</i>	
IX Anatomical Observations in Birds and Rabbits	429
<i>Observationes Anatomicae in Avibus & Cuniculis</i>	
X Observations Concerning Movement of the Heart, the Auricles and Vena Cava, Extracted from Dissections of Various Animals Carried out Here and There	435
<i>Ex Variorum Animalium Sectionibus Hinc Inde Factis Excerptae Observationes Circa Motum Cordis Auricularumque & Venae Cavae</i>	

XI	Vesicles in the Lung. Anatomy of a Pregnant Rabbit. Experiments in Lungs. The Milky Vessels of the Udders. Observations in a Swan, Etc.	441
	<i>De Vesiculis in Pulmone. Anatome Cuniculi Praegnantis in Pulmonibus Lacteis Experimenta. In Cygno Observationes, & C.</i>	
XII	Diversity of Lymphatic Ducts	446
	<i>Lymphaticorum Varietas</i>	
XIII	Prologue of an Apologia in Which It Is Demonstrated That the Blaesian Judge Is Ignorant in Anatomy and a Slave of His Sympathies	449
	<i>Apologiae Prodromus, Qvo Demonstratur, Judicem Blasianum & Rei Anatomicae Imperitum Esse, & Affectuum Suorum Servum</i>	
XIV	New Structure of Muscles and Heart	459
	<i>Nova Musculorum & Cordis Fabrica</i>	
XV	Specimen of Observation on Muscles and Glands	463
	<i>De Musculis & Glandulis Observationum Specimen</i>	
XVI	A Letter on the Anatomy of the Ray	487
	<i>De Anatome Rajae Epistola</i>	
XVII	On the Passage of Yolk into the Intestines of the Chick	499
	<i>De Vitelli in Intestina Pulli Transitu Epistola</i>	
XVIII	The Discourse on the Anatomy of the Brain	507
	<i>Discours Sur L'Anatomie du Cerveau</i>	
XIX	Observations on Egg and Chick	529
	<i>In Ovo & Pullo Observationes</i>	
XX	Dissection of an Embryo Monster for Parisians	537
	<i>Embryo Monstro Affinis Parisiis Dissectus</i>	
XXI	The Uterus of a Hare Dissolving Its Own Foetus	541
	<i>Uterus Leporis Proprium Foetum Resolventis</i>	
XXII	Specimen of Elements of Myology	545
	<i>Elementorum Myologiae Specimen, Seu Musculi Descriptio</i>	
XXIII	A Carcharodon-Head Dissected	571
	<i>Canis Carchariae Dissectum Caput</i>	
XXIV	Description of the Dissection of a Dogfish	597
	<i>Historia Dissecti Piscis ex Canum</i>	

XXV	Anatomical Observations Concerning the Eggs of Viviparous Animals	603
	<i>Observationes Anatomicae Spectantes Ova Viviparorum</i>	
XXVI	Observations Concerning the Eggs of Viviparous Animals	611
	<i>Ova Viviparorum Spectantes Observationes</i>	
XXVII	The Prodromus to a Dissertation on a Solid Naturally Contained Within a Solid	621
	<i>De Solido Intra Solidum</i>	
XXVIII	On a Calf with Hydrocephalus	661
	<i>De Vitulo Hydrocephalo</i>	
XXIX	Letter to the Grand Duke Cosimo III on the Grottos above Gresta	671
	<i>On The Grotto Above Gresta</i>	
XXX	Letter to the Grand Duke Cosimo III on the Grottos of Moncodeno	673
	<i>On The Grotto of Moncodine</i>	
XXXI	Preface to Anatomical Demonstrations in the Copenhagen Theatre in the Year 1673	679
	<i>Prooemium Demonstrationum Anatomicarum in Theatro Hafniensi Anni 1673</i>	
XXXII	Description of the Muscles of an Eagle	685
	<i>Historia Musculorum Aquilae</i>	
XXXIII	Circular Course of the Blood Made Clearer Through Separation of the Ventricles of the Heart	703
	<i>Receptaculi Sangvinis Circulus per Ventriculorum Cordis Separationem ab Invicem Manifestior Redditus</i>	
	Abbreviations, Archives and Libraries	707
	Bibliography	709
	Index of Persons	727
	Index of Places	737