# MAN RISES TO PARNASSUS

BY HENRY FAIRFIELD OSBORN

# Man Rises to Parnassus

# Critical Epochs in the Prehistory of Man

#### BY

#### HENRY FAIRFIELD OSBORN

A.B., Sc.D., Princeton; LL.D., Trinity, Princeton, Columbia; Hon. Sc.D., Cambridge; Hon. D.Sc., Yale, Oxford, New York; Hon. Ph.D., Christiania (Oslô); For. Memb. Royal Society Research Professor of Zoology, Columbia University Senior Geologist, U. S. Geol. Survey President, American Museum of Natural History



# MCMXXVIII PRINCETON UNIVERSITY PRESS PRINCETON NEW JERSEY

LONDON: HUMPHREY MILFORD OXFORD UNIVERSITY PRESS

# COPYRIGHT, 1927, 1928, BY PRINCETON UNIVERSITY PRESS PUBLISHED, DECEMBER 1927 SECOND EDITION, FEBRUARY 1928

PRINTED AT THE PRINCETON UNIVERSITY PRESS PRINCETON, NEW JERSEY, U. S.A.

# TO MY BROTHER WILLIAM CHURCH OSBORN

in appreciation of his active share
as a Trustee in raising the
standards of Scholarship
and Research
in his
Alma Mater
PRINCETON UNIVERSITY

#### PROLOGUE

 $I_{\nu}$ '  $\delta \pi \delta$  δειράσι νιφοβόλοις Παρνασοῦ κατενάσθη Φοίβου μέλαθρα. Where 'neath the snow-beaten ridges of Parnassus were stablished the courts of Phoebus.—Euripides.<sup>1</sup>

In the spirit of the rise to Parnassus we may direct our inquiry in these lectures especially toward evidence for the spiritual, intellectual and moral, rather than toward the physical, characters of the prehistoric races.

Hitherto our attention has been directed mainly to the anatomical characters of fossil man because these characters were the first to come to the surface. Indeed, human and comparative anatomy, throughout its long history, dating back to the Greeks, has never enjoyed a series of triumphs greater than the philosophic interpretation of fossilized remains which are too often fragmentary and incomplete. The anatomy of prehistoric man by these very triumphs has won a far larger share of attention than his higher characteristics. We shall in time be in a position to tell with great precision the whole story of the physical ascent of man—the story of his food, of his bodily babits and customs, of his modes of locomotion whether walking or climbing, of his ever increasing capacity for the use of tools, for the chasing of game and for physical and intellectual contests with his fellow-man. In studying all these anatomical attributes—for example, the form, weight, and psychic areas on the surface of the human brain—the point we shall chiefly

<sup>1</sup>Professor Edward D. Perry of Columbia University, to whom the author owes this citation, writes October 29, 1926: "The last two words do not actually occur in this position, but they are used just above in the choral ode and are to be understood as the subject of the verb  $\kappa \alpha \tau \epsilon \nu \dot{\alpha} \sigma \theta \eta$ . Note that in texts of the time of Euripides the name of the mountain was written with only one  $\sigma$ ."

[ vii ]

stress is not these anatomical characters per se, but their bearing on our knowledge of the development of the mind and spirit of man.

In other words, the higher philosophical interpretations of crude anatomical and archaeological facts lead up to the higher central theme of these lectures, namely, how man rose to Parnassus.

In my previous lectures and writings since the year 1891 on the absorbing subject of prehistoric man, especially in "Men of the Old Stone Age," I have from the first endeavored to redeem bis reputation of being very close to the brutes and of possessing many qualities of character and of mind which we do not like to associate with any of our ancestors, however remote. I do not share the contempt with which many uninformed people regard the higher members of creation which, though they were not actually ancestral, bear many resemblances to ourselves. Prolonged and sympathetic observation reveals many noble traits of character in all the higher members of the mammalian kingdom, near to or remote from ourselves. Among all the social mammals and birds, especially, we observe comradeship, mutual belpfulness, maternal and paternal devotion to the young, the sharing of danger, and willingness to sacrifice life for offspring or for a comrade. Such moral traits, if observed in ourselves, would rank high among the most desirable elements of human character.

Similar noble traits are also widely manifested among primitive human societies and especially among those who have had the least contact with western civilizations. These traits include the safeguarding of the family, protection and careful upbringing of the young, protection of the chastity of women, inculcation of absolute integrity both in word and deed, communal and tribal cooperation for the general welfare,

#### PROLOGUE

reverence for higher supernatural powers, love of decoration, of beauty and of art. Practically none of the primitive races exhibits all these fine traits; some of the primitive races exhibit none of them. In recent anthropology we may refer to several sympathetic observers of primitive peoples, such as Herbert Ward in Africa, William T. Hornaday, William Beebe in the Far East, and especially Robert Lowie, who has treated primitive society, morals, and religion in a masterly manner.

All human races, fossil or living, demand our sympathetic understanding, and we should endeavor to extend this appreciative understanding alike to the existing and to the prebistoric races of man. We need not deny to our Stone Age ancestors moral traits which we observe among primitive peoples today. By prolonged and intensive research we have discovered that the lower Stone Age men are the equals in brain power of some of the primitive existing peoples, and that some of the higher Stone Age men are actually superior to some of the higher existing races.

Thus we are venturing into the new and fascinating but little trodden field of the gradual rise of the higher powers of man. It is true that we cannot progress very far, but it will be admitted that our psychic theme transcends in interest even the greatest triumphs of human and comparative anatomy.

HENRY FAIRFIELD OSBORN.

American Museum of Natural History and Columbia University February 28-March 4, 1927. Since this volume went to press there has appeared J. Reid Moir's volume, "The Antiquity of Man in East Anglia," in which especially the information regarding the Dawn Man of East Anglia is amplified and the discovery fully described by this original and most able observer. But J. Reid Moir and Sir E. Ray Lankester both differ widely from the present author in respect to the geologic antiquity of the Dawn Man of East Anglia and with respect to comparison of the flint culture of East Anglia and the Cromer Forest Bed with pre-Chellean and Chellean cultures of the River Somme in France (compare Fig. 2). Naturally, these correlations of flint and of geologic horizons are subject to further research, but the present author feels confident that the geologic table on page 24 (Fig. 1), is substantially correct.

#### CONTENTS

CONTENTS	
	PAGE
Prologue	vii
List of Illustrations	xiii
I: The Greeks Foresee the Gradual Rise of Man  The Olympic deities not helpful—The Greeks chiefly interested in the origin of man—The rise of anatomy and of physiology—Prometheus voices the spirit of discovery	3
II: The Dawn Man of East Anglia — Traveler, Hunter, Flint Worker  The Dawn Stone Age: Newly discovered evidence of the great antiquity of man — The Bramford flint workers of the Upper Pliocene — The Foxhall Dawn Man found near Ipswich — His flint quarry and fireplace — The Dawn Man of Piltdown, Sussex — The flint implements of Foxhall and Piltdown similar.  The Old Stone Age: The giant flints of Cromer mark the beginning of the Old Stone Age and possible ancestry of the Neanderthaloid races of Heidelberg, Krapina, Ehringsdorf and Neanderthal — The Trinil Dawn Man of Java	23
III: Man of the Cave Period — Sculptor, Engraver, Painter  The Neanderthals the first cave dwellers — Influence of cave life on imagination — The birth of sculpture in southern France — Discoveries in the Caverne Tuc d'Audoubert — Discovery of the etchings in the Caverne des Trois Frères — The human and equine sculptures of Laussel and Cap Blanc	87

# CONTENTS

IV:	Our Ancestors Arrive in Scandinavia  The rudiments of architecture, of mining, of navigation — The Mesolithic or transitional period — The glaciers give prehistoric chronology — Northward migration of the Campignian flint workers — Successive reindeer, moose and stag periods of Denmark and Sweden — The shell mound period of Denmark — Divisions of the Bronze and Neolithic ages in Denmark and Sweden — Beginnings of Mediterranean trade	121
V:	The Sun-Worshippers of Brittany in the New Stone and Bronze Ages  Survivals of Bronze Age tradition — Bretons of the Alpine and Mediterranean races — The environment of the 'Menhirs' and 'Tumuli' — The eastern origin of sun-worship — The circular suntemples of Carnac and Stonehenge — Ruins of the great tumuli or burial-mounds — The interpretation of Carnac	157
VI:	The First Steps to Parnassus in Central Asia  The west European theory of human origin — The north Asiatic theory— The central Asiatic theory— Why Mongolia may be the home of primitive man— The undiscovered Dawn Man of central Asia— Andrews strengthens the central Asiatic theory of human origin— The racial problem before the time of Darwin— The three primary human stocks or super-races— The three primary races of Europe— Causes of the divergence of races, species and stocks— The influence of posture on the human skeleton— The amphibious life of the primitive Hawaiians— How to produce an arboreal type of man— How a secondary race of squatting men might be produced— The future rise of man	187
Epilo	gue	22
	ography	229
Index	c	23

Figure Ten In the Bramford Quarry near Ipswich	37
Figure Eleven In the Heart of the Foxhall Quarry near Ipswich	38
Figure Twelve Alleged Human Jaw Recorded by Collyer	41
Figure Thirteen Great Foxhall Quarry near Ipswich	45
Figure Fourteen Pleistocene Cliffs of Cromer, Norfolk	46
Figure Fifteen Five Flint Implements from the 16-foot Level of the Foxhall Quarry and One from the Sub-Red Crag of Bramford	50
Figure Sixteen Diagrammatic Section of the Face of the Foxhall Quarry	52
Figure Seventeen Relics of the Piltdown Race	57
Figure Eighteen Scene of the World-Famous Discovery of the Piltdown Dawn Man of Sussex	58
Figure Nineteen Section of the Piltdown Gravels	60
Figure Twenty High Pliocene Level of the Piltdown Gravel	63
Figure Twenty-One Sketches by the Author of the Scene of the Fifteen Years' Search by A. Smith Woodward for Fragments of the Skull and Teeth and for Evidence of the Flint and Bone Industry of Eoanthropus Dawsoni	64

Figure Twenty-Two Flints Found by Charles Dawson in the Piltdown Gravel	65
Figure Twenty-Three Worked Bone and Flint Tools Found near the Piltdown Skull	73
Figure Twenty-Four Giant Coup de Poing or Hand Axe of Cromer, Norfolk	74
Figure Twenty-Five Flint Implements from Kent's Cavern, Devonshire	74
Figure Twenty-Six Geologic Strata of Cliffs of Cromer	78
Figure Twenty-Seven Brain of the Trinil Dawn Man	80
Figure Twenty-Eight Brain of the Living Australian	81
Figure Twenty-Nine The Neanderthal Empire of the Old Stone Age	88
Figure Thirty Neanderthal Flint Workers in Front of the Shelter of Le Moustier	91
Figure Thirty-One Migration of the Reindeer along the River Somme in the Spring Season	91
Figure Thirty-Two Cro-Magnon Artists in the Cavern of Font-de-Gaume	92
Figure Thirty-Three  Migration of the Woolly Mammoth along the River Somme in the Spring Season	92
Γxv ٦	

Figure Thirty-Four Old Stone Age Art and Sculpture Region	
of Southern France	96
Figure Thirty-Five	
Stream Issuing from the Limestone Mountain, Tuc d'Audoubert	99
Figure Thirty-Six	
Entrance of the Rivulet Volp into the Mountain, Tuc d'Audoubert	99
Figure Thirty-Seven	
The Stalactite Chamber of the Galerie Supérieure	100
Figure Thirty-Eight	
The Clay Bisons of the Galerie Supérieure	100
Figure Thirty-Nine	
Foot Impression of the Sculptor of the Bisons	104
Figure Forty	
Interior of the Limestone Mountain of	
Tuc d'Audoubert near Saint Girons	105
Figure Forty-One	
Wall Etchings in Les Trois Frères	107
Figure Forty-Two	
The Sorcerer of Les Trois Frères	108
Figure Forty-Three	
The Sorcerers of Lourdes and of Les Trois Frères	108
Figure Forty-Four	
The Rock Shelter of Laussel	115
Figure Forty-Five	
Stone Sculptures of Laussel	116

[ xvi ]

Figure Forty-Six The Famous Celtic Horse of Cap Blanc	116
Figure Forty-Seven Flint Industrial Areas of Western Eurasia during the Closing Period of the Old Stone Age	122
Figure Forty-Eight Gerard De Geer and Oscar Montelius	127
Figure Forty-Nine Beginning of the Neolithic or New Stone Age in Northern Europe	128
Figure Fifty Survival of the Stone Age in North America	128
Figure Fifty-One Advance and Retreat of Glaciation IV	129
Figure Fifty-Two Reindeer, Moose and Stag of Campignian Age	130
Figure Fifty-Three Wide Geographic Distribution of the Campignian Flint Industry	132
Figure Fifty-Four Tranchet or Flint Axe from Campigny, France	133
Figure Fifty-Five Tranchet or Flint Axe from Svaerdborg, Denmark	136
Figure Fifty-Six The Tranchet and Pic of the Campignian Stage	141
Figure Fifty-Seven Flint and Bone Implements of Sweden	142
Figure Fifty-Eight Tranchet or Flint Axe from Sweden	143
Г xvii Л	100

Figure Fifty-Nine Miner's Pick from Northern Egypt and Mode of Its Attachment	146
Figure Sixty Prototype of the Viking Ship	149
Figure Sixty-One The Fur-Covered Cabane	151
Figure Sixty-Two Bronze Bowl and Bronze Collarette	152
Figure Sixty-Three  Map Showing the Motor Routes and Distances from Vannes through Auray to Carnac and Locmariaquer	159
Figure Sixty-Four The Region from Carnac to Locmariaquer	160
Figure Sixty-Five Entrance Gate and Courtyard of the Archaeological Museum of Vannes	161
Figure Sixty-Six Dolmen de Crucuno, near Carnac	161
Figure Sixty-Seven The Three Racial Types of Modern Brittany	162
Figure Sixty-Eight The Island of Gavr'Inis in the Golfe du Morbihan near Locmariaquer	167
Figure Sixty-Nine The Grand Menhir of Locmariaquer	167
Figure Seventy The Superb Galerie of Gavr'Inis	168
Figure Seventy-One Engraved Stones within the Dolmens	171
P 4	

[ xviii ]

Figure Seventy-Two The Wheat Design on the Triangular Stone of the Table des Marchands	172
Figure Seventy-Three Incised Symbol of the Hache or Battle-Axe of the Bronze Age	172
Figure Seventy-Four Key to the Three Best-Preserved Alignments of Carnac	175
Figure Seventy-Five Alignements du Menec, Carnac	179
Figure Seventy-Six Ceremonial and Ornamental Objects from the Dolmens near Carnac	179
Figure Seventy-Seven Giant Cromlech, Stonehenge	180
Figure Seventy-Eight Theoretic Dispersal and Distribution of the Principal Races of Man	193
Figure Seventy-Nine Theory of Central Asiatic Origin and Dispersal of Mankind	202
Figure Eighty The Most Famous Running Type — Paavo Nurmi of Finland	211
Figure Eighty-One The World-Famous Swimming Type — Duke Kahonomoku of Hawaii	211
Figure Eighty-Two The Superior Climbing Type — Pygmies of the Belgian Congo	212
Figure Eighty-Three Effects of the Squatting Habit	212

# THE GREEKS FORESEE THE GRADUAL RISE OF MAN