

THE

DESCENT OF MAN

AND SELECTION

IN RELATION TO SEX

BY CHARLES DARWIN, M.A., F.R.S.

WITH ILLUSTRATIONS

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PREFACE TO THE SECOND EDITION.

During the successive reprints of the first edition of this work, published in 1871, I was able to introduce several important corrections; and now that more time has elapsed, I have endeavoured to profit by the fiery ordeal through which the book has passed, and have taken advantage of all the criticisms which seem I am also greatly indebted to a large number of correspondents for the communication of a surprising number of new facts and remarks. have been so numerous, that I have been able to use only the more important ones; and of these, as well as of the more important corrections, I will append a list. Some new illustrations have been introduced, and four of the old drawings have been replaced by better ones, done from life by Mr. T. W. Wood. I must especially call attention to some observations which I owe to the kindness of Prof. Huxley (given as a supplement at the end of Part I.), on the nature of the differences between the brains of man and the higher apes. I have been particularly glad to give these observations, because during the last few years several memoirs on the subject have appeared on the Continent, and their importance has been, in some cases, greatly exaggerated by popular writers.

I may take this opportunity of remarking that my critics frequently assume that I attribute all changes of corporeal structure and mental power exclusively to the natural selection of such variations as are often called spontaneous; whereas, even in the first edition of the 'Origin of Species,' I distinctly stated that great weight must be attributed to the inherited effects of use and disuse, with respect both to the body and mind. I also attributed some amount of modification to the direct and prolonged action of changed conditions of life. Some allowance, too, must be made for occasional reversions of structure; nor must we forget what I have called "correlated" growth, meaning, thereby, that various parts of the organisation are in some unknown manner so connected, that when one part varies, so do others; and if variations in the one are accumulated by selection. other parts will be modified. Again, it has been said by several critics, that when I found that many details of structure in man could not be explained through natural selection, I invented sexual selection; I gave. however, a tolerably clear sketch of this principle in the first edition of the 'Origin of Species,' and I there stated that it was applicable to man. This subject of sexual selection has been treated at full length in the present work, simply because an opportunity was here first afforded me. I have been struck with the likeness of many of the half-favourable criticisms on sexual selection, with those which appeared at first on natural selection; such as, that it would explain some few details, but certainly was not applicable to the extent to which I have employed it. My conviction of the power of sexual selection remains unshaken; but it

is probable, or almost certain, that several of my conclusions will hereafter be found erroneous; this can hardly fail to be the case in the first treatment of a subject. When naturalists have become familiar with the idea of sexual selection, it will, as I believe, be much more largely accepted; and it has already been fully and favourably received by several capable judges.

Down, Beckenham, Kent, September, 1874.

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CONTENTS.

INTRODUCTION

Pages 1-5

PART I.

THE DESCENT OR ORIGIN OF MAN.

CHAPTER I.

THE EVIDENCE OF THE DESCENT OF MAN FROM SOME LOWER FORM.

Nature of the evidence bearing on the origin of man—Homologous structures in man and the lower animals — Miscellaneous points of correspondence — Development—Rudimentary structures, muscles, sense-organs, hair, bones, reproductive organs, &c.—The bearing of these three great classes of facts on the origin of man

AGE

CHAPTER II.

On the Manner of Development of Man from some Lower Form.

Variability of body and mind in man—Inheritance—Causes of variability—Laws of variation the same in man as in the lower animals—Direct action of the conditions of life—Effects of the increased use and disuse of parts—Arrested development—Reversion—Correlated variation—Rate of increase—Checks to increase—Natural selection—Man the most dominant animal in the world—Importance of his corporeal structure—The causes which have led to his

becoming erect — Consequent changes of structure — Decrease in size of the canine teeth — Increased size and altered shape of the skull—Nakedness—Absence of a tail—Defenceless condition of man	PAGE 38
	•
CHAPTER III.	
Comparison of the Mental Powers of Man and the Lower Animals.	
The difference in mental power between the highest ape and the lowest savage, immense—Certain instincts in common — The emotions—Curiosity—Initiation—Attention	

CHAPTER IV.

98

Memory—Imagination—Reason—Progressive improvement
—Tools and weapons used by animals — Abstraction, Selfconsciousness—Language—Sense of beauty—Belief in God,

spiritual agencies, superstitions

COMPARISON OF THE MENTAL POWERS OF MAN AND THE LOWER ANIMALS—continued,

CHAPTER V.

On the Development of the Intellectual and Moral Faculties during Primeval and Civilised times.

Advancement of the intellectual powers through natural selection — Importance of imitation — Social and moral

	٠		
*	ī	1	7

CONTENTS.

	PAGE
faculties-their development within the limits of the same	
tribe - Natural selection as affecting civilised nations-	
Evidence that civilised nations were once barbarous	195

CHAPTER VI.

ON THE AFFINITIES AND GENEALOGY OF MAN.

Position of man in the animal series—The natural system genealogical — Adaptive characters of slight value — Various small points of resemblance between man and the Quadrumana—Rank of man in the natural system—Birthplace and antiquity of man—Absence of fossil connecting-links.— Lower stages in the genealogy of man, as inferred firstly from his affinities and secondly from his structure—Early androgynous condition of the Vertebrata—Conclusion

225

CHAPTER VII.

ON THE RACES OF MAN.

The nature and value of specific characters—Application to the races of man—Arguments in favour of, and opposed to, ranking the so-called races of man as distinct species—Subspecies—Monogenists and polygenists—Convergence of character—Numerous points of resemblance in body and mind between the most distinct races of man—The state of man when he first spread over the earth—Each race not descended from a single pair—The extinction of races—The formation of races—The effects of crossing—Slight influence of the direct action of the conditions of life—Slight or no influence of natural selection—Sexual selection.

PART II.

SEXUAL SELECTION.

CHAPTER VIII.

PRINCIPLES OF SEXUAL SELECTION.

Secondary sexual characters—Sexual selection—Manner of action - Excess of males - Polygamy - The male alone generally modified through sexual selection-Eagerness of the male-Variability of the male-Choice exerted by the female—Sexual compared with natural selection—Inheritance at corresponding periods of life, at corresponding seasons of the year, and as limited by sex-Relations between the several forms of inheritance-Causes why one sex and the young are not modified through sexual selection-Supplement on the proportional numbers of the two sexes throughout the animal kingdom-The proportion of the sexes in relation to natural selection

CHAPTER IX.

SECONDARY SEXUAL CHARACTERS IN THE LOWER CLASSES OF THE ANIMAL KINGDOM.

These characters are absent in the lowest classes-Brilliant colours-Mollusca-Annelids-Crustacea, secondary sexual characters strongly developed; dimorphism; colour; charaters not acquired before maturity-Spiders, sexual colours of; stridulation by the males-Myriapoda 400

CHAPTER X.

SECONDARY SEXUAL CHARACTERS OF INSECTS.

Diversified structures possessed by the males for seizing the females-Differences between the sexes, of which the meaning is not understood-Difference in size between the

sexes—Thysanura—Diptera—Hemiptera—Homoptera, musical powers possessed by the males alone-Orthoptera, musical instruments of the males, much diversified in structure: pugnacity; colours-Neuroptera, sexual differences in colour -Hymenoptera, pugnacity and odours-Coleoptera, colours: furnished with great horns, apparently as an ornament; battles; stridulating organs generally common to both sexes 422

CHAPTER XI.

INSECTS, continued .- ORDER LEPIDOPTERA.

(BUTTERFLIES AND MOTHS.)

Courtship of Butterflies - Battles - Ticking noise-Colours common to both sexes, or more brilliant in the males-Examples-Not due to the direct action of the conditions of life-Colours adapted for protection-Colours of moths-Display-Perceptive powers of the Lepidoptera-Variability-Causes of the difference in colour between the males and females-Mimicry, female butterflies more brilliantly coloured than the males-Bright colours of caterpillars-Summary and concluding remarks on the secondary sexual character of insects-Birds and insects compared .

CHAPTER XII.

SECONDARY SEXUAL CHARACTERS OF FISHES, AMPHIBIANS, AND REPTILES.

·FISHES: Courtship and battles of the males-Larger size of the females-Males, bright colours and ornamental appendages; other strange characters-Colours and appendages acquired by the males during the breeding-season alone-Fishes with both sexes brilliantly coloured-Protective colours-The less conspicuous colours of the female cannot be accounted for on the principle of protection-Male fishes building nests, and taking charge of the ova and young. AMPHIBIANS: Differences in structure and colour between the sexes-Vocal organs.

				۰
40	-	7	۰	Ŧ.
А	æ	v		

CONTENTS.

REPTILES: Chelonians—Crocodiles—Snakes, colours in some cases protective—Lizards, battles of—Ornamental appendages
—Strange differences in structure between the sexes—Colours

-Sexual differences almost as great as with birds .

PAGE

. 507

CHAPTER XIII.	•
SECONDARY SEXUAL CHARACTERS OF BIRDS.	
Sexual differences—Law of battle—Special weapons—Vocal organs—Instrumental music—Love-antics and dances—Decorations, permanent and seasonal—Double and single annual moults—Display of ornaments by the males	549
CHAPTER XIV.	
BIRDS—continued.	
Choice exerted by the female—Length of courtship—Unpaired birds—Mental qualities and taste for the beautiful—Preference or antipathy shewn by the female for particular males—Variability of birds—Variations sometimes abrupt—Laws of variation—Formation of ocelli—Gradations of character—Case of Peacock, Argus pheasant, and Urosticte	61
CHAPTER XV.	
Birds—continued.	
Discussion as to why the males alone of some species, and both sexes of others are brightly coloured—On sexually-limited inheritance, as applied to various structures and to brightly-coloured plumage—Nidification in relation to colour—Loss of nuptial plumage during the winter	67

CHAPTER XVI.

BIRDS-concluded.

CHAPTER XVII.

SECONDARY SEXUAL CHARACTERS OF MAMMALS.

The law of battle—Special weapons, confined to the males—
Cause of absence of weapons in the female—Weapons
common to both sexes, yet primarily acquired by the male
—Other uses of such weapons—Their high importance—Greater
size of the male—Means of defence—On the preference shewn
by either sex in the pairing of quadrupeds • • • 763

CHAPTER XVIII.

SECONDARY SEXUAL CHARACTERS OF MAMMALS-continued.

PART III.

SEXUAL SELECTION IN RELATION TO MAN,

AND CONCLUSION.

CHAPTER XIX.

SECONDARY SEXUAL CHARACTERS OF MAN.

PAGE

Differences between man and woman—Causes of such differences, and of certain characters common to both sexes—Law of battle
—Differences in mental powers, and voice—On the influence of beauty in determining the marriages of mankind—Attention paid by savages to ornaments—Their ideas of beauty in women
—The tendency to exaggerate each natural peculiarity . . .

846

CHAPTER XX.

SECONDARY SEXUAL CHARACTERS OF MAN-continued.

On the effects of the continued selection of women according to a different standard of beauty in each race—On the causes which interfere with sexual selection in civilised and savage nations—Conditions favourable to sexual selection during primeval times—On the manner of action of sexual selection with mankind—On the women in savage tribes having some power to choose their husbands—Absence of hair on the body, and development of the beard—Colour of the skin—Summary

CHAPTER XXI.

GENERAL SUMMARY AND CONCLUSION

·	SOM	LIMITALL	1 1111	0 00	NOLLUE	olon.			
Main conclusion that ma	n is	desce	ended	from	some	lowe	r form	_	PAGE
Manner of developmen									
moral faculties—Sexua	ai sei	ection	1	neluc	ling r	emar	KS.		926
SUPPLEMENTAL NOTE			,						948
INDEX		,						,	955

THE DESCENT OF MAN;

AND

SELECTION IN RELATION TO SEX.

INTRODUCTION.

THE nature of the following work will be best understood by a brief account of how it came to be written. During many years I collected notes on the origin or descent of man, without any intention of publishing on the subject, but rather with the determination not to publish, as I thought that I should thus only add to the prejudices against my views. It seemed to me sufficient to indicate, in the first edition of my 'Origin of Species,' that by this work "light would be thrown "on the origin of man and his history;" and this implies that man must be included with other organic beings in any general conclusion respecting his manner of appearance on this earth. Now the case wears a wholly different aspect. When a naturalist like Carl Vogt ventures to say in his address as President of the National Institution of Geneva (1869), "personne, en "Europe au moins, n'ose plus soutenir la création "indépendante et de toutes pièces, des espèces," it is manifest that at least a large number of naturalists must admit that species are the modified descendants of other species; and this especially holds good with the younger and rising naturalists. The greater number accept the agency of natural selection; though some urge, whether with justice the future must decide, that I have greatly overrated its importance. Of the older and honoured chiefs in natural science, many unfortunately are still opposed to evolution in every form.

In consequence of the views now adopted by most naturalists, and which will ultimately, as in every other case, be followed by others who are not scientific, I have been led to put together my notes, so as to see how far the general conclusions arrived at in my former works were applicable to man. This seemed all the more desirable, as I had never deliberately applied these views to a species taken singly. When we confine our attention to any one form, we are deprived of the weighty arguments derived from the nature of the affinities which connect together whole groups of organisms—their geographical distribution in past and present times, and their geological succession. The homological structure, embryological development, and rudimentary organs of a species remain to be considered, whether it be man or any other animal, to which our attention may be directed; but these great classes of facts afford, as it appears to me, ample and conclusive evidence in favour of the principle of gradual evolution. The strong support derived from the other arguments should, however, always be kept before the mind.

The sole object of this work is to consider, firstly, whether man, like every other species, is descended from some pre-existing form; secondly, the manner of his development; and thirdly, the value of the differences between the so-called races of man. As I shall confine myself to these points, it will not be necessary to describe in detail the differences between the several races—an enormous subject which has been fully discussed in many valuable works. The high antiquity of man has recently been demonstrated by the labours of a host of eminent men, beginning with M. Boucher de Perthes; and this is the indispensable basis for understanding his origin. I shall, therefore, take this conclusion for granted, and may refer my readers to the admirable treatises of Sir Charles Lyell, Sir John Lubbock, and others. Nor shall I have occasion to do more than to allude to the amount of difference between man and the anthropomorphous apes; for Prof. Huxley, in the opinion of most competent judges, has conclusively shewn that in every visible character man differs less from the higher apes, than these do from the lower members of the same order of Primates.

This work contains hardly any original facts in regard to man; but as the conclusions at which I arrived, after drawing up a rough draft, appeared to me interesting, I thought that they might interest others. It has often and confidently been asserted, that man's origin can never be known: but ignorance more frequently begets confidence than does knowledge: it is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved by science. The con-