All the great military hegemonies — those of Spain in the sixteenth century, that of France under Louis XIV., that of France under Napoleon — have met with a rapid extinction. Let Prussia beware: its radical policy may engage it in a series of complications from which it will not be long permitted to disengage itself. A penetrating eye would see, perhaps, in the present the nucleus of the future coalition already formed: the wise friends of Prussia whisper to it, not as menace, but as warning, 'Vae victoribus!'

"We shall see the end of war, when to the principle of nationalities shall be joined the principle which is its connective, — of the European federation, superior to all nationalities."

DARWIN'S DESCENT OF MAN.

"*Homo sum et nihil alienum*," &c. Why not apply the musty old proverb to man's origin as well as to his destiny? "Old and New" will entertain fairly, and as impartially as possible, Mr. Darwin's view;[1] for it is both: — how old, we are hardly prepared to say; yet, as here treated, the topic is wonderfully new and fresh, and, if not altogether inviting, this is only because (as the author persuades us) of certain inherited prejudices, which we really ought to have outgrown. What strikes us most as we turn over the pages is, first the confident and then the captivating way in which Mr. Darwin puts the case of the bestial origin of man, and how he contrives at the outset not only to diminish adverse prepossession, but to suggest considerations tending to make one rather vain than otherwise of the earlier portion of the pedigree. As a specimen of the author's confidence, note his statement, — after tracing out in the first chapter the similarities or identities of bodily structure which pervade the whole animal kingdom, its head included, — that, "Consequently, we ought frankly to admit their community of descent. To take any other view is to admit that our own structure, and that of all the animals around us, is a mere snare laid to entrap our judgment. . . . It is only our natural prejudice, and that arrogance which made our forefathers declare that they were descended from demi-gods, which leads us to demur to this conclusion." Inheritance explains it all, — explains even our reluctance to admit the foregone conclusion.

Mr. Darwin is not merely a great naturalist, but an artist, a consummate pleader, skilled in the art of putting things. Whatever his remoter ancestry, the mixed blood of Aristotle and Socrates doubtless runs in his veins. First he excites sympathy for "our poor relations," telling us (p. 11) how monkeys, in their native land, are "liable to catarrh, with the usual symptoms; and which, when often recurrent, lead to consumption." Some suffer from apoplexy, inflammation of the bowels, and cataract of the eye; and the

[1] The Descent of Man, and Selection in Relation to Sex. By Charles Darwin, M.A., F.R.S., &c. With illustrations. In two volumes. London: John Murray. New York: D. Appleton & Co. 1871.

younger ones, shedding their milk teeth, often die from fever. And "many kinds of monkeys have a strong taste for tea, coffee, and spirituous liquors," and will also "smoke tobacco with pleasure." A poet of widest fame, and who is said to have exemplified his own line, tells us that

"Man, being rational, must get drunk."

But even this inglorious distinction vanishes with the rest. "Brehm asserts that the natives of North-eastern Africa catch the wild baboons by exposing vessels with strong beer, by which they are made drunk. . . . And he gives a laughable account of their behavior and strange grimaces. On the following morning, they were very cross and dismal. They held their aching heads with both hands, and wore a most pitiable expression. When wine or beer was offered them, they turned away with disgust, but relished the juice of lemons," their best available substitute for the prescribed

"Couple of red
Herring with soda-water."

"These trifling facts prove how similar the nerves of taste must be in monkeys and man; and how similarly their whole nervous system is affected," as the propagation of specific diseases from brutes to men, and *vice versa*, shows the same for the other tissues and the blood. Then he presents pleasanter scenes, — the "happiness, never better exhibited than by young animals, such as puppies, kittens, lambs, &c., when playing together, like our own children. Even insects play together, as has been described by that excellent observer, P. Huber, who saw ants chasing and pretending to bite each other, like so many puppies." The love of a dog for his master; the story of the dog suffering under vivisection, licking the hand of the operator, who, "unless he had a heart of stone, must have felt remorse to the last hour of his life;" the dog's jealousy of his master's affection if lavished on any other creature, — which is also observed of monkeys, — showing that they not only love, but have the desire to be loved; their liability to dislike and hatred, and the long-delayed and artful revenge of various animals; their manifest love of approbation, apparent feeling of emulation and even of magnanimity, — the big dog scorning to hurt the provoking little one; the sense of shame, as distinct from that of fear, in dogs; and Mr. Darwin says, "something very like modesty when begging too often for food." The statement "that monkeys certainly dislike being laughed at; and, finally, the case, for which Mr. Darwin vouches, of a baboon he saw in the Zoölogical Gardens, who always got into a furious rage when his keeper read aloud to him, — that is, who was impatient of being preached at, and showed it unbecomingly, — these, and such-like suggestions of a common nature, are introduced in a most captivating way. Nor should we pass unnoticed such specimens of the author's skill and acuteness as that in which, treating of rudimentary organs and their meaning, he presses into service the rare case of male lactation in the human species, — bringing the subject home to men's business and bosoms; or that in which he, or perhaps rather Mr. Woolner the seulptor, detects the last traces of the faun, the vestige of formerly pointed ancestral ears, "in a little blunt point, projecting from the inwardly folded margin or helix," which is not rarely dis-

tinctly noticeable in man, and which manifestly answers to the more obvious point of that part of the ear in baboons; or where he shows that the wisdom-teeth, so strong and durable in many savage races, are "tending to become rudimentary in the more civilized races of man," "the posterior dental portion of the jaw being always shortened," according to Prof. Schaafhausen, in the civilized races; "and this shortening may, I presume, be safely attributed to civilized men habitually feeding on soft, cooked food, and thus using their jaws less. I am informed by Mr. Brace, that it is becoming quite a common practice in the United States to remove some of the under teeth of children, as the jaw does not grow large enough for the perfect development of the normal number." If we mistake not, an American *savant* found in this diminution of jaw one evidence of the gradual approximation of the Saxon race on this soil to the American Indian type. On the contrary, it may now be adduced as crowning confirmation of the fact that the Yankee race stands at the very head of civilization.

When Whewell's remark, in his Bridgewater Treatise, "Who that reads the touching instances of maternal affection, related so often of the women of all nations and of the females of all animals, can doubt that the principle of action is the same in the two cases?" Mr. Darwin follows it up with the following illustrations, evidently intended to lead the simple reader to echo the question, with a difference, "Who can doubt that the *actors* are the same in the two cases?"

"Rengger observed an American monkey (a bibus) carefully driving away the flies which plagued her infant [which is more than Fellah mothers do in Egypt]; and Duvancel saw a hylobates washing the faces of her young ones in a stream. So intense is the grief of female monkeys for the loss of their young, that it invariably caused the death of certain kinds kept in confinement by Brehm in N. Africa. Orphan monkeys were always adopted and carefully guarded by the other monkeys, both males and females. One female had so capacious a heart that she not only adopted young monkeys of other species, but stole young dogs and cats, which she continually carried about. . . . An adopted kitten scratched the above-mentioned affectionate baboon, who certainly had a fine intellect; for she was much astonished at being scratched, and immediately examined the kitten's feet, and without more ado bit off the claws. In the Zoölogical Gardens, I heard from the keeper that an old baboon had adopted a Rhesus monkey: but, when a young drill and mandrill were placed in the cage, she seemed to perceive that these monkeys, though distinct species, were her nearer relatives; for she at once rejected the Rhesus, and adopted both of them."

So brought on, we first tolerate, then admire. Then, turning to the end of the book, a less pleasing picture is presented to us.

"The astonishment which I felt on first seeing a party of Fuegians on a wild and broken shore will never be forgotten by me; for the reflection at once rushed to my mind, — such were our ancestors. These men were absolutely naked, and bedaubed with paint; their long hair was tangled, their mouths frothed with excitement, and their expression was wild, startled, and distrustful. They possessed hardly any arts, and, like wild animals,

in the prevalent idea of separate originations. The few (and they included some of the soundest and best) who already saw that the ground was becoming untenable as well as sterile, and who were convinced that related species must have been derived from a common ancient stock, were in no haste to re-open the general question into which amateur speculators rush with such alacrity. Now, on the contrary, almost all naturalists and natural philosophers, of whatever school or bias, the principal opponents of Darwin included, agree in one thing if nothing else, namely, in disbelieving "that every separate species has been a separate creation, not born, but separately made." This gives Mr. Darwin a vantage which he does not fail to profit by, in pressing the doctrine of evolution to its ultimatum, that man must be included with other organic beings in any general conclusion respecting his manner of appearance on the earth.

Whatever be thought of the argument and of its consequences, no one will deny that the book is very interesting reading, even more so than its predecessors. We speak, however, only of the moiety of the two volumes which directly treats of the descent of man. Fully half of the work is devoted to the curious but somewhat recondite subject of sexual selection throughout the animal kingdom, the bearing of which upon the origination of man is rather unimportant. That is, of the *species* man (and Mr. Darwin, by the way, concludes the species to be one): in the formation of the *races* of men, sexual selection — which we must not now stop to explain — is thought to have played an important part; and Mr. Darwin's exposition of it affords a capital specimen of his genius.

In the whole treatment, the vast accumulation of facts from every available source, the skill with which they are handled, and with which seemingly unimportant and trivial things are turned to account in unexpected ways; the weird fascination of the topic, even the unwelcomeness of the conclusions which you can hardly either accept or evade; the alternation of expectation and hope that the argument will break down, set against the admiration which some ingenious hit or sagacious interpretation extorts; the entire and almost contagious confidence of the writer, and his unwavering faith, not rarely reminding one of the "*credo quia impossibile est*," — all this renders the book as exciting as any novel.

For a specimen of simple complacency, take the remark *apropos* to idiots, whose arrested brain-development, with the correlated changes, brings them into resemblance with the lower types of mankind and with brutes: "they are strong and remarkably active, continually gambolling and jumping about, and making grimaces; they often ascend stairs on all-fours, and are curiously fond of climbing up furniture or trees." And so, "We are thus reminded of the delight shown by almost all boys in climbing trees; and this, again, reminds us how lambs and kids, originally alpine animals, delight to frisk on any hillock, however small."

Here we are not in the least inclined to bring into use the muscles spoken of in the following extract. It relates to the canine teeth, which in every large collection of human skulls are found to project in some cases beyond the others, notably so in some ancient skulls; which are said to be more deeply implanted, and by a stronger fang, than the incisors, in

the Melanian races, especially the Australian; and which are inferred to have done other work than mastication in former times.

"The males alone of the anthropomorphous apes have their canines fully developed; but in the female gorilla, and in a less degree in the female orang, these teeth project considerably beyond the others: therefore the fact that women sometimes have, as I have been assured, considerably projecting canines, is no serious objection to the belief that their occasional great development in man is a case of reversion to an ape-like progenitor. He who rejects with scorn the belief that the shape of his own canines, and their occasional great development in other men, are due to our early progenitors having been provided with these formidable weapons, will probably reveal by sneering the line of his descent. For though he no longer intends, nor has the power, to use these teeth as weapons, he will unconsciously retract his 'snarling muscles' (thus named by Sir C. Bell) so as to expose them ready for action, like a dog prepared to fight."

What manner of person this "fearfully and wonderfully made" ancestor of ours may have been, who first "gave the world the promise of a man," Mr. Darwin informs us "by the aid of the principles of morphology and embryology" on page 206 *et seq.* of the first volume, and more summarily on page 389 of the second volume. "The early progenitors of man were no doubt once covered with hair, both sexes having beards; their ears were pointed, and capable of movement; and their bodies were provided with a tail, having the proper muscles. . . . . The foot, judging from the condition of the great toe in the fœtus [a character pointed out by our Prof. Wyman], was then prehensile;" the habits arboreal, so that the tail was probably prehensile too, though this is not mentioned.

"The males were provided with great canine teeth, which served them as formidable weapons." "This creature, if his whole structure had been examined by a naturalist, would have been classed among the quadrumana, as surely as would the common and still more ancient progenitor of the Old and New World monkeys." Upon grounds of structure and geographical distribution, it is shown that the ultimately human offshoot was later than the division into the Old World and New World series, and sprang from the former, in "some warm forest-clad land." The quadrumana, and all the higher mammals, are probably derived from an ancient marsupial animal," — so that "playing possum" is merely a trick of reversion, like the climbing of trees by boys, and the gambolling of lambs on hillocks. Farther back, the line is obscurely traced, "either from some reptile-like or some amphibian-like creature, and this again from some fish-like animal. In the dim obscurity of the past, we can see that the early progenitor of all the vertebrata must have been an aquatic animal, provided with branchia, with the two sexes united in the same individual, and with the most important organs of the body (such as the brain and heart) imperfectly developed. This animal seems to have been more like the larvæ of our own existing marine Ascidians than any other known form." Therefore — and here is the most far-reaching deduction we ever heard of — as the tidal Ascidian "must have been left dry or covered deep with water, supplied with copious food or stinted,

during endless generations at regular lunar intervals, . . . the mysterious fact, that with the higher and more terrestrial vertebrata, not to mention other classes, many normal and abnormal vital processes run their course according to lunar periods, is rendered intelligible!" Immensely *post hoc, ergo propter hoc.*

Here we may as well stop, and gather breath.

That "Man still bears in his bodily form the indelible stamp of his lowly origin," and is bound up corporeally with the animal kingdom, of which he is the last term of a series, are propositions which present no insuperable difficulty, — at least to those who accept the doctrine of the derivation of species generally. The chasm to be leaped or bridged is that which divides the human intellectual and moral nature from the brute. How, and with what success, Mr. Darwin attempts this we must expound on another occasion, if at all. Let us close with one brief quotation, which we can unhesitatingly indorse: —

"The birth, both of the species and of the individual, are equally parts of that grand sequence of events, which our minds refuse to accept as the result of blind chance. The understanding revolts at such a conclusion." (Vol. ii., page 396.)

Our corollary — if it be not mere reiteration in other terms — is, that our minds equally refuse to accept the sequence of the evolution of forms and faculties as the result of blind natural selection, of the interplay merely of known physical forces and contingencies. Also, that while the *order* of the steps of evolution is by the theory made conceivable, not to say probable, their *cause* still remains without adequate scientific explanation.

CO-OPERATIVE AGRICULTURE.[1]

We called attention to Mr. Pare's curious book some months ago; and we have been asked by different correspondents, at the West and elsewhere, to give the detail of the method described. It is a sad record of what seemed thorough success breaking down suddenly in wretched failure. It is hard to apply this experience, as a whole, to American methods of life and society; but the book is full of suggestions which the large landholders at the West will be glad to take hold of. If, as we believe, co-operative methods of organizing industry are the methods on which the work of the future is to be done, every experiment tried in the arrangements of agriculture is so much gain.

Mr. John Vandeleur, an Irish gentleman, owned lands in the west of Ireland, in County Clare, in the worst period of Irish wretchedness and dissatisfaction. On his property this dissatisfaction at last came to a crisis; and its extent was revealed by the murder of his steward. It became Mr. Vandeleur's affair to repair to the spot, and make some arrangement for carrying on his farming there, and collecting his dues. He probably had not so many applications for the office of steward as the postmaster at New York has for his vacant clerkships.

Mr. Vandeleur, as it happened, was at that time an enthusiastic believer in dear old Robert Owen's plans for "Family Unions." These plans were based on a very wide-sweeping acceptance of what people call socialistic

[1] Co-operative Agriculture: A solution of the Land Question, as exemplified in the History of the Ralahine Co-operative Agricultural Association County Clare, Ireland. By William Pare, F. S. S. London: Longmans, Green, Reader, and Dyer, 1870.