

We trust we shall not be believed to approve the demands the Company are now making. Our single point is, that they ought to be allowed, if they are to continue to exist, to make any profits they can by selling absolutely pure gas—i.e. such gas as is a contemptible compromise not worth having—at the lowest price the House can induce them to take.

MR. DARWIN AT THE ANTPODES.

THE native (Maori) saying is, 'As the white man's rat has driven away the native rat, so the European fly drives away our own, as the clover kills our fern, so will the Maori disappear before the white man himself.' True, says Dr. Hooker, the eminent naturalist of our New Gardens, is a remarkable article in the new number of the *Popular Science Review* on "The Struggle for Existence amongst Plants." "The European honey-fly," says Dr. Hooker, "seems to drive out before it the native blue-bottle of New Zealand, so that settlers, knowing its value, carry it in boxes and bottles to their inland stations." So, too, in the vegetable world the vegetable emigration from Europe seems to drive before it the native products of the New Zealand soil. "The colony train of English migration is not more usefully doing its work than the steady tide of English weeds, which are sweeping over the waste, cultivated, and virgin soil, in actually increasing numbers of grasses, species, and individuals." Dr. Hooker quotes a New Zealand correspondent to the same effect.—

"You would be surprised at the rapid spread of European and other foreign plants in this country. All along the sides of the main lines of rail through the plains, a *Polygonum* (*persicaria*), called 'our grass,' grows most luxuriantly, the roots sometimes two feet in depth, and the plants spreading over an area from four to five feet in diameter. The dock (*Rumex obtusifolius* or *R. crispus*) is to be found in every river-bed, extending into the valleys of the mountain streams, until these become mere torrents. The new ditches in ground all over the country, growing luxuriantly nearly up to 4,000 feet. The watercourse increases in size all rivers in such a manner as to threaten to choke them altogether; in fact, in the South, a still deeper stream, running through Christchurch, the nearest out of keeping the river low for boat navigation and for purposes of drainage exceeds 1850. I have assessed some twelve feet long and three quarters of an inch in diameter. In some of the mountain districts, where the soil is loam, the white clover is completely displacing the native grass, through a mere frost."

—and later in his article he tells us the most remarkable fact of all, that,—

"The little white clover, and other herbs, are actually strangling and killing outright the New Zealand flax (*Phormium tenax*), a plant of the coarsest, hardest, and toughest description, that forms large matted patches of woody stems, which stand up like a row of tall narrow staves, six to ten feet high, and luxuriantly strong in texture and size. I know of no English plant to which the New Zealand flax can be likened, so as to give any idea of its robust constitution and habit, in those who do not know it. It is more vigorous than the great matted tussock of *Carex pedunculata* approach it. It is difficult enough to imagine the possibility of white clover leveling our tops, and smothering the tussocks of this *Carex*, but this would be child's play in comparison with the resistance the *Phormium* would seem to offer."

It is an illustration of the same process that the European horse as introduced in South America, so to gain rapidly upon the native animals of those plains, and that in New Zealand the English pig runs wild and multiplies at a rate which is a serious danger to the sheep farmers, whose flocks of lambs the wild pig destruction. That a little and apparently feeble plant like clover should be able to win a complete victory over the formidable tussock flax of New Zealand, and that the English fly should drive out the blue-bottle which is such a nuisance to the settlers, are striking illustrations of the apparent power which human civilization seems to lend to even the animals and plants that have thoroughly adapted themselves to its conditions.—Illustrations which inevitably suggest the superstitious view of the subject conveyed in the Maori proverb with which we commenced this article. It seems as if the more local connection with civilized beings which is implied in housing in civilized windows and growing on ploughed fields, were a physical basis to the constitution of animals and plants which enables them, when put in competition with the native lambs, animals, or plants of barbarous countries, to win at once a victory as civilization wins over barbarism. Does not the English fly contrast a coming down its evidence in English larches, which makes it more than the match of the big Maori blue-bottle? Have not the clover and watercress introduced, by the process of selection, structural habits of consuming the juices of the comparatively poor English soil, which give them an advantage over the plants that have grown up for ages in a soil too rich to

need any such provision for assimilating all the most nutritious elements of growth? It is quite conceivable that in an old and much tilled country only the most hardy species, those which have the most powerful attraction for the juices in the soil on which they live, will succeed in yielding good crops, while in a very rich country,—especially when combined with a milder climate,—this process of contest between the more and less vigorous species will go on much more tranquilly and slowly, so that the race between one plant and another for nutrition may not have elaborated anything like such special powers of competition for us. Dr. Hooker tells us that seedlings of the cedar and the maple come up even with us in the early spring by thousands in the grass-ground where they are planted, but then, as soon as the grass begins to grow again, the grass drives away all their supplies of nourishment, and they die away. This seems to show that perennial grasses have a much stronger relative attraction for the nutritious elements of the earth than seedling trees; but in New Zealand it would seem, from Dr. Hooker's account that even annuals from Europe often beat New Zealand perennials in the race. That is, it may be, the seeds of the European plants obtain in a few months as strong a hold of the ground as the native perennials have gained in many years, and then by virtue of their "naturally selected" species, assimilate with more rapidity and effect than their perennial neighbours the juices of the soil, and so starve the plants in their vicinity. The vegetable world in England has gone through centuries of competition for existence with other vegetation, has lost by the death of the weaker plants all the more luxuriant and feeble elements of its physiology, while the New Zealand perennials, living undisturbed in a milder climate and much richer soil, has been left comparatively without any process of competitive selection, till, like the luxurious man who has had all his comforts and necessaries at his elbow, when competing for existence against the trained hunter who has lived by the halibut and gas, he is worsted at every turn by the harder rival. It would be easy, of course, to suggest a similar account of the success of the European fly and European rat in competing against the native blue-bottle and the native rat. In neither case, probably, is it due to greater strength or ferocity, greater aptitude for war, but to habits trained through successive generations under more difficult circumstances. These European flies and rats which have not been able to adapt themselves to their conditions in a country where the most nourishing food is usually half-dry, spiced, and where all wild animals have less and less chance every year, have died out, and only those remained which by harder constitution, greater caution, less offensive habits, and more subtle instincts, have been able, while opposing themselves, sufficiently to avoid the enmity of man to prevent any war of extermination being waged against them. And these trained instincts of course led greatly in their favour when they come to be pitted against races which have not hitherto needed them for their protection. Such is the apparently most natural inference from Dr. Hooker's strange array of facts to prove that while the plants and animals of the antipodes show no increased fertility when transplanted to Europe, no tendency to run our native plants head in the struggle for existence, our plants and animals show so much colonizing capacity as man himself when they emigrate with him to New Zealand. We take the case of New Zealand rather than that of any other single soil, like South America, because though many of the same phenomena are true of South America also, the conditions of climate are there generally so different that the experiment is frustrated by many other considerations. In New Zealand, on the contrary, though the climate is rather milder, owing to the greater extent of sea, the climatic conditions are everywhere like those of England.

We have striven purposely to suggest an interpretation of these very curious and as yet unexplained facts which is entirely in the spirit of Mr. Darwin's great work,—and, of course, as if any suggestion of ours could have the least scientific weight, but because the opinion of the day evidently inclines to attach more and more value to Mr. Darwin's hypothesis, at least as explaining the mode of growth of all these modifications of species which occurs the vitality and tenacity of the surviving form. But now what picture does this process really present to us of our little antipodes?—and, as some of the Darwinians think, of inexorable law sifting out the weak and casting them away as refuse, or one of strongly wise preparation for the dwelling-place of a being in whose the principle of "natural selection" gives way to the higher principle of moral selection? To us the latter seems the true image left upon the mind by the curious process the antipodes indicate to us. Here are a great number of strange laws at work, the total effect of which is to give to all the plants and animals which are least inconsistent with, and most useful to, the life

of the most civilized races of man, a direct share in the protection of that civilization. The shield of civilization is as it were in some sense thrown over those inferior races of existence which, though in a competent to share it, and generally not even directly protected or guarded by man, are yet at the second remove, as it were, most important, in order to enable him to carry with ease into the still uncultivated and uncolonized parts of the earth the full advantage he has gained by long residence in cultivated and civilized regions. The animal and vegetable traits of life which he cannot help drawing after him wherever he goes, the old grasses and weeds and flowers, the old insects and beasts, as well as those more salubrious plants and domestic animals which he takes pains to carry with him, have all gained by their conditions of life in the Old World that hardness which fits them to colonize as well as man himself, and to force their way into his new home without asking his consent, at the expense of the native flora and fauna. Everything not only that man intentionally brings with him, but that crawls after him almost by itself, spreads as he spreads. A moving atmosphere of power drifts to his steps, so that even the lowest creatures which he has found useful or even but supportable for instance in one place, will drive out, without giving him any trouble, the creatures which he would find comparatively useless or even insupportable in another. The clover driving the fern and even the sword-grass before it, and so preparing a rich pasture for the sheep,—the little house-fly, transported in boxes and bottles, and then left to supplant the disgusting native blue-bottle by its own energies, are but special illustrations of the general law that all that man has found on the whole—very often unconsciously, as in the case of the fly—suitable and, comparatively speaking, advantageous to him in ages of civilization, has during those ages been carrying without knowing it the power to follow him successfully into other regions, where the conditions of animal and vegetable life would otherwise be much less favorable to his existence, and so to share the charmed life of civilization without being the objects of his intentional protection. Naturally one would have supposed that by the law of the "conflict for existence," the lush tropical forests of South America, the crowded tree and thick ferns of New Zealand, would have struggled with the most tremendous advantages against the foreign germs which civilized man brings with him, and which are so essential to his progress. And so it would be certainly, if art alone were his only dependence; if every animal and vegetable inconsistent with his comfort and safety had to be industriously exterminated, instead of retreating almost as if by magic, before him. But the fact is quite otherwise. The wild animals and wild growths even of the tropical forests yield easily before the weaker invader that has gone through the selecting process inseparable from civilization. The clover follows man into the heart even of South American jungles, displacing the rank grasses it finds there. The horse and the sheep and the pig multiply in these new wastes of vegetation with infinitely more rapidity than the wild animals which are native there. Man, of course, takes his arts with him, but where he might expect to have to fight Nature hardest with his most marvellous efforts, nature seems to acknowledge the more magic of his preparations, and to yield to him without hesitating on any laborious application of them. Even the tangled forests of the Amazon will probably yield to the first sincere effort at immigration with infinitely less difficulty than we expect. Rich, wild, and virgin soils flourish weak and comparatively unproductive forms of life, both animal and vegetable. The very luxuriance of growth is perhaps a sign of the weakness. The harder and colder vitality of "selected,"—i. e. civilized,—nature, soon beats the luxuriance of wild nature in the race.

And we must remember that this process of "natural" selection,—selection with respect merely to weakness and strength,—is created directly we reach man, directly we reach a being endowed with a character which fits us so that there is a weakness stronger than strength, indeed a strength in weakness itself, when that weakness is the weakness of reason, self-denial, and love. Our Poor Laws, our hospitals, our healing art, our charities, are all so many agencies for counteracting the process of "natural selection" so soon as we arrive at a stage of culture when we can see that more strength, more tenacity of life, is not itself divine. Natural selection stops, or begins to stop, with the very race for whom it has hitherto worked with so beneficial an effect. It prepares a higher vehicle for civilized man, and enables him to conquer with infinitely greater ease other regions not thus suitable for him, and thus the being for whom all this has been done, is taught that after all his highest duty and noblest function is relation to his own race lies in reversing the process, in pro-

tecting the weak, in lifting up the hands that hang down, in strengthening the feeble knees, in guarding with the tenderest care every spark of human reason and human love. How should a being placed in the position which man holds on the earth by long ages of merely "natural selection," of struggle for existence, have learned that this very process, this fierce competitive strife, is one of the very lowest of his functions,—the one, indeed, which he shares with the lower order of plant and animal,—if the Providence which had watched over the man process had not been willing to give the correct and the great appliances to His own teaching, the moment He had at last prepared for Himself a being worthy of it? To our minds the most wonderful side of the Darwinian theory is, that it shows us, in such strong contrast, what God has really done to perfect our physical and animal nature, and that the being for whom He has done all this, and who is the first to know it, is the first also to know that the law of conflict and competition is the lowest of the laws of human nature, and is recognized by us only in learning to keep it well under us. It would be the strongest of all paradoxes if a universe really created for by the law of competition, was created by the one being who, in his highest moments, reverses and repudiates that law.

THE PROVINCIAL HISTORY OF ENGLAND.

XXIV.—SOUTH AND SOUTH-SOUTH.—SARON PROVINCE.

AN DERIDA appears as one of the barons of the Court of

the Saxon Shore or March in Britain, and as mentioned by a company of the *Abels*, wherever there may have been. What the exact nature of this Saxon March was must remain a doubtful point, nor can we say with certainty that the name implies a Saxon occupation. It seems, however, at any rate, to imply a state of things similar to that in which the eastern coast of Britain was placed during the Scandinavian invasions of a subsequent period, and bearing this in mind, there seems every probability of considerable occupation as well as incessant attacks on the "Saxon Shore" at an early period, by the miscellaneous populations included in the vague name Saxons. It would only be in harmony with what we know to have taken place elsewhere in Britain, if the Roman Emperor transplanted some tribes from the Continent to the parts of the coast of Britain, to serve as a barrier against native invasions or foreign invasions. When the imperial central authority became the prey of rival chiefs, nothing would be more probable than that the occupants of the Saxon Shore would take a part in the struggle, and some dim and distorted recollection of these contests may be embodied in the stories of the Saxon conquests of South Britain handed down to us. To secure the Roman fortress within this district would be among the first efforts of these "Saxons," and accordingly we find the siege and fall of *Andelric* especially mentioned in the Saxon legends. Among these we find the following statements, which must be referred to the Province of which we are now speaking. "477.—In this year *Ellis* came to Britain, and his three sons, *Cyran*, *Wlencing*, and *Cissa*, and drew ships [the usual number in all these Saxon legendary invasions] at the place which is named *Cymannore*, and there drew many Wales, and drove some in flight into the wood which is named *Andelric-Langa* [or *Andelric-Laa*]. 485.—In this year *Ellis* fought against the *Wales* [or *Wodas*], near the bank of *Markeles-Dunne*. 491 [or 492].—In this year *Ellis* and *Cissa* besieged *Andelric-Caster*, and drew all that drew therein, and even one Briton was there left." Such is the brief legendary record of the Saxon occupation of *Bomer* in its earliest form. *Beke* tells us that *Ellis* became *Eastwald*, i. e. paramount over the Saxons in Britain; and supposing such a Saxon chief to have assumed the old title of *Cones* of the Saxon Shore, this may readily have been the case. A contemporary of *Beke's* (*Ellis*) also tells us that this Province, in consequence of the great number of its rocks and the density of its woods, remained unconquered by the other Provinces. We are told that *Cissa* succeeded his father, *Ellis*, and died at the age of 117, and that his posterity continued to reign among the South Saxons—as the people of *Ellis* were subsequently called; and then this Province is left devoid of even a legendary history for 120 years. *Henry* of *Huntingdon*, indeed, amplifies—possibly from early Saxon legends—the account of the taking of *Andelric*, but the story of the struggles of the Saxon Shore men and the *Norman* Regal, and the condition of the Province under its new lords, must be left to imagination. At the close of this unknown period we find it playing part in the struggles between the West Saxons and *Mercians*, and dependent alternately on each, as the fortune of war vacillated between them. In the year 980 we are told that *Elfredwald*,