

THE SCRAP BOOK.

INSTINCTIVE LOVE OF MIMICRY BY A MOTH.

I PASS now from these exhibitions of instinct in the class of birds to one which I observed in the class of insects during the recent winter, November, 1882. It was in the beautiful Riviera, where insect life continues much more active at that season than it can be anywhere in the north of Europe. But even there, although bees are busy during the greater part of winter, and some of our own *Sylviadæ* find an abundant living throughout the season, the Order of the *Lepidoptera* are generally dormant. I was surprised, therefore, late in the month of November, to see a large insect of this order come from above the olive-trees overhead, with the wild, dashing flight of the larger moths. Attracted apparently by a sheltered and sunny recess in which scarlet geraniums and bignonias were in full flower, it darted downwards, and after a little hovering, settled suddenly on the bare ground underneath a geranium plant. I then saw that it was a very handsome species, with an elaborate pattern of light and dark chocolate browns. But the margins of the upper or anterior wings, which were deeply waved in outline, had a lustrous yellow colour, like a brilliant gleam of light. In this position the moth was a conspicuous object. After resting for a few seconds, apparently enjoying the sun, it seemed to notice some movement which gave it alarm. It then turned slightly round, gave a violent jerk to its wings, and instantly became invisible. If it had subsided into a hole in the ground, it could not have more completely disappeared. As, however, my eyes were fixed upon the spot, I soon observed that all the interstices among the little clods around were full of withered and crumpled leaves of a deep blackish brown. I then further noticed that the spot where the moth had sat was apparently occupied by one of these, and it then flashed upon me in a moment that I had before me one of the great wonders and mysteries of nature. There are some forms of mimicry which are wholly independent of any action on the part of the animals themselves, and this kind of mimicry is especially common in this class of insects. They are often made of the shape and of the colour which are most like those of the surrounding objects in their habitat. They have nothing to do except to sit still, or perhaps to crouch. But there are other forms of mimicry in which the completeness of the deception depends on some co-operation of the animal's own will. This was one of these. The splendid margins of the upper wings, with their peculiar shape and their shining colour, had to be concealed; and so, by an effort which evidently required the exertion of special muscles, these margins were somehow folded down, reverted, covered up, and thus hidden out of sight. The remainder of the wings, or the under surfaces which were now made uppermost, were coloured and so crumpled up that they imitated exactly the dried and withered leaves around.

And now I tried an experiment to test another feature in the wonderful instincts which are involved in all these operations. That feature is the implicit confidence in its success which is innate in all creatures furnished with any apparatus of concealment. I advanced in the full sunlight close up to the moth—so close that I could see the prominent "beaded eyes," with the watchful look—and the roughened outlines of the thorax, which served to complete the illusion. So perfect was the deception, that I really could not feel absolutely confident that the black spot I was examining was what I believed it to be. Only one little circumstance reassured me. There was a small hole in the outer covering through which a mere point of the inner brilliant margin could be seen shining like a star. Certain now as to the identity of the moth, I advanced still nearer, and finally I found that it was not till the point of a stick was used to touch and shake the earth on which it lay that the creature could believe that it was detected and in danger. Then in an instant by movements so rapid as to escape the power of vision, the dried and crumpled leaf became a living moth, with energies of flight defying all attempts at capture.—*From "The Unity of Nature," by the Duke of Argyll.*

BASE BALL.

The base-ball season is fairly upon us. Talk about nines and scores and errors and fouls and umpires and all the rest of it is heard upon every hand—it comes before either flies or mosquitoes, and there is not the smallest chance but that it will stay after both are gone. The very small boy has his small game in a vacant lot, and pitches and bats and runs and falls and buries his nose in the earth and gets miscellaneous bruises and wounds like a veteran—and yells like a Comanche Indian let what will happen; children of larger growths show the same zeal in this pursuit of pleasure in the same way; college boys dodge bats and ball with the delightful enthusiasm peculiar to their kind, and so on all the way through. Clerk and carpenter, gutter-snipe and granger, tinker and tailor—every man and boy must somehow get a right to risk his bones in a "nine." You may even see a pretty girl playing catch and toss with one of those terribly hard white balls in an earnest way which shows that only skirts and the proprieties keep her out of the fray. Whole stores are given up to "base-ball goods," and some merchants who sell harmless merchandise are depraved enough to offer balls and bats, and even hideous caps, as premiums to those that buy their wares.

There are amateur players and professionals. The former may be distinguished by his habit of quickly taking the ball in his left hand after catching it with his right, and shaking the latter much as a cat shakes a wet paw. The climax and zenith and final culmination of the whole base-ball system, however, is reached only when a game is played by a couple of squads of professionals in the "league." These men are hired by associations of intelligent persons in the large cities, and play for gate-money.

Their performances have, from a sporting point of view, precisely the interest that attaches to the acrobatic and other feats of the sawdust ring, and no more. The men are not intellectual giants, and they run for their supper and for that only.

But it is of no use to reason or argue. The base-ball craze is here, and it attacks all without regard to age, sex, colour or previous condition. Not all can play, to be sure, but all can talk. There need be no multiplying of words about this, for every one knows how it is. The ears of even the most inoffensive person are assailed by base-ball talk from morning until night, go where he will. In every house, in the street, in stores, shops and offices, and even in the fields if there is one human being within ear-shot, discussion and dissertation are ever present; it is impossible to find relief, and deafness is robbed of its terrors. Let us, however, not condemn the national game too harshly. Those who are young may hope to outlive the present insane rage, and those whose sands of life are fewer may at least consider that the base-ball business tends to relieve the intellectual strain of the country in electing a president.—*Springfield Republican.*

LAND NATIONALIZATION IN NEW ZEALAND.

MR. E. WAKEFIELD, Member of the New Zealand House of Representatives, writes denying that the principle of land colonization has been adopted, or would be popular in New Zealand:—"The very essence of colonization is the inextinguishable desire of freemen to be their own landlords. It is this which has established in New Zealand within forty years a British community of more than half-a-million of the most prosperous, contented, and law-abiding people in the world; and we certainly are not going to abandon at this stage an institution which has made us what we are, and which still supplies the chief inducement of the most desirable kind of immigration. You say the nationalization of the land may answer in a new country. Permit me to say, on the contrary, that it is in a new country where such a tenure would be most ruinous, for the reason that it offers no incentive to energy, perseverance, bold pecuniary enterprise, or that indomitable endurance of hardship which is inseparable from early settlement. Neither are there in a new country those terrible social anomalies connected with land ownership which, in old countries, appear at first sight, at least, to justify the proposals of Mr. Wallace, if not those of Mr. George. In New Zealand, for example, land is a chattel. It is bought and sold, and 'swopped,' just like sheep, or cattle, or furniture, or groceries. In every village there are half-a-dozen land agents lawfully qualified to convey land, and the same practitioner who prepares the deeds—merely a printed form—will survey the land, negotiate the bargain, and, if required, lend the purchase money at current rates. The whole question, I solemnly believe, lies in a nutshell. Free trade in land is the antidote for monopoly of land. We have a few great estates in this country, which were bought when land was cheap and have since been held for a speculative profit. But there is absolutely no 'landlordism' here in the Irish, Scotch, or English sense; and there never will be so long as the Land Transfer Act is in operation. There is not a large landowner in New Zealand but is only waiting for his price to 'cut up' his estate and sell it in lots to suit purchasers."

AGASSIZ'S OBJECTION TO THE DARWINIAN THEORY.

PROFESSOR TYNDALL has given us an interesting anecdote of a very celebrated man whom the world has lately lost. He tells us that he heard the great Swiss naturalist Agassiz express an almost sad surprise that the Darwinian theory should have been so extensively accepted by the best intellects of our time. And this surprise seems again in some measure to have surprised Professor Tyndall. Now it so happens that I have perhaps the means of explaining the real difficulty felt by Agassiz in accepting the modern theory of Evolution. I had not seen that distinguished man for nearly five and thirty years. But he was one of those gifted beings who stamps an indelible impression on the memory; and in 1842 he had left an enthusiastic letter on my father's table, at Inverary, on finding it largely occupied by scientific works. Across that long interval of time I ventured lately to seek a renewal of acquaintance, and during the year which proved to be the last of his life, I asked him some questions on his own views on the history and origin of Organic Forms. In his reply Agassiz sums up in the following words his objections to the theory of Natural Selection as affording any satisfying explanation of the facts for which it professes to account. "The truth is, that life has all the wealth of endowment of the most comprehensive mental manifestations, and none of the simplicity of physical phenomena."—*From "The Unity of Nature," by the Duke of Argyll.*

FASHION has seldom looked kindly upon patent leather shoes. Patent leather shoes have somehow never been thought quite the thing. And, moreover, they are not comfortable. The sun draws the leather, and then they clasp the foot unpleasantly close. But this summer they are going to make patent leather the mode if they can. Patent leathers are cheaper than they used to be. Now all grade shoes sell only about a dollar lower than patents. However, the patents do not last as well as calfskin, and they must not get wet. But they are easily cleaned. They do not have to be blackened; a rag with a little oil on it is all that is required. Patent leathers are only for gentlemen. Ladies never wear them. Why, I do not know except it is that they have too much taste. But the shoe of shoes for Summer for gentlemen is to be of seal skin. As for boots, there are hardly any made for regular wear, except for conservative old gentlemen who never change their habits. Thirty years ago it was all boots.—*Progress.*