

## A NATURALIST IN LA PLATA.

Few books of interest to the naturalist have attracted so much favorable comment in the last year as the work by Mr. Hudson, on his life and experiences on the La Plata, in the Argentine Republic. Here, in the flat grass-covered pampas bordering this river and stretching in an illimitable sea of feathery spikes as far as the eye can follow its fluctuating surface, Mr. Hudson has, with a painstaking love, watched the wild denizens of this great plain, taking affectionate note of the biggest and the least. His own words are so beautiful and graphic, in which he describes the glorious pampas grass, that the reader feels transported to the singular and lovely scene, where it fills everything with its presence. He says: "The plant is social, and in some places, where scarcely any other kind exists, it covers large areas with a sea of fleecy white plumes. In late summer and in autumn the tints are seen varying from the most delicate rose, tender and illusive as the blush on the white under-plumage of some gulls, to purple and violaceous. At no time does it look so perfect as in the evening, before and after sunset, when the softened light imparts a mistiness to the crowding plumes, and the traveler cannot help fancying that the tints, which then seem richest, are caught from the level rays of the sun, or reflected from the colored vapors of the afterglow."

The life of these weird expanses has been studied by Mr. Hudson with diligence, and he has given to his observations a peculiar original value, for he has traced the reflections which they suggest in reference to the wider questions of animal economy and origin.

Mr. Hudson says the mammalian life of the pampas is restricted, being composed for the most part of the common rodent, the vizacha, the Patagonian hare, the coypir, "a brown animal with bright red incisors, a rat in shape, and as large as an otter," a small, mouse-colored creature, "with a low, gurgling language, like running, babbling waters;" and an interesting animal called the *tucó-tucó*, from its singular cry, "for all day long and all night sounds its voice, resonant and loud, like a succession of blows from a hammer, as if a company of gnomes were toiling far down under foot, beating on their anvils, first with strong, measured strokes, then with lighter and faster, and with a swing and rhythm as if the little men were beating in time to some rude chant unheard above the surface." Besides these are found the great carnivores, the jaguar and puma, two large cats, the grass and wood cat, two canines, the "pestiferous skunk," the ruminant deer (*Cervus campestris*), the male of which emits a "rank, musty odor, so powerful that when the wind blows from it the effluvia comes in nauseating gusts to the nostrils from a distance exceeding two miles," armadillos and opossums. There is a numerous bird life, and the omnipresent and diversified insect fauna, with its oddities of habit, and a restricted batrachian and reptilian population.

Our author dwells with much fondness on the rhea, the ostrich-like tenant of these boundless prairies, which has a long ancestry of extinct forms and is itself a relic of a past when its progenitors approached near in time to the glyptodon and megatherium. He says: "Its commanding stature gives it a wide horizon; and its dim, pale, bluish-gray color assimilates to that of the haze, and renders it invisible at even a moderate distance. Its large form fades out of sight mysteriously, and the hunter strains his eyes in vain to distinguish it on the blue expanse. Its figure and carriage have a quaint, majestic grace, somewhat unavian in character and peculiar to itself. There are few more strangely fascinating sights in nature than that of the old black-necked cock bird, standing with raised, agitated wings among the tall-plumed grasses, and calling together his scattered hens with hollow boomings and long, mysterious suspirations, as if a wind blowing high up in the void sky had found a voice."

A very curious series of anecdotes are given to prove the inexplicable friendliness exhibited for man by the puma, the agile and remorseless panther who destroys the deer, the horse and huanaco, ravages the sheep folds and faces with success the powerful but sluggish jaguar. This dangerous beast seems touched in the presence of man with a strange humility, and this "mysterious, gentle instinct" has secured for it the pleasant appellation of "amigo del cristiano," or friend of the Christian. It has been known to leap and gambol about a defenseless traveler, purring, and winding with terrifying playfulness about his legs, and in captivity, if domesticated when young, it assumes the nature of a monstrous cat. Perhaps the most striking anecdote given by Mr. Hudson in proof of his singular assertions is the following: "A gaucho, while looking with a companion for cattle, found a puma. It sat up with its back against a stone, and did not move even when his companion threw the noose of his lasso over its neck. My informant then dismounted, and, drawing his knife, advanced to kill it; still the puma made no attempt to free itself from the lasso, but it seemed to know, he said, what was coming, for it began to tremble, the tears ran from its eyes, and it whined in the most pitiful manner. He killed it as it

sat there unresisting before him, but after accomplishing the deed felt that he had committed a murder." It seems that in California, in the earliest days of its occupancy by men, the pumas increased prodigiously, because they were superstitiously regarded by the natives as friendly animals, and unmolested in consequence.

In a chapter on "Curious Animal Weapons" our author describes a curious and new frog, provided with bulging and vigorous muscles on its fore legs with which it grasps an intruder or enemy, and, squeezing it tightly, suddenly relaxes its embrace, taking advantage of the surprise or prostration caused by its violent hug to effect its escape. He describes also the "venomous toad," producing a very disagreeable picture. He says its "skin is of a rich brilliant green, with chocolate colored patches, oval in form, and symmetrically disposed. The lips are bright yellow, the cavernous mouth pale flesh color, the throat and under surface dull white. The body is lumpy, and about the size of a large man's fist. The eyes, placed on the summit of a disproportionately large head, are embedded in horn-like protuberances, capable of being elevated or depressed at pleasure. When the creature is undisturbed, the eyes, which are of a pale gold color, look out as from a couple of watch towers, but when touched on the head or menaced, the prominences sink down to a level with the head, closing the eyes completely, and giving the creature the appearance of being eyeless." These disgusting objects bite savagely and hang on to their victim with the tenacity of a bull dog, poisoning the blood with glandular secretions. When teased it swells up most loathsomely and follows its tormenter about with clumsy jumps, its big mouth wide open, and uttering an incessant croak.

Mr. Hudson devotes a chapter to the "mephitic skunk," and empties upon its devoted head all his contempt and horror. It does not assume or wear those attractive features which Prof. Merriam, with singular eccentricity, assigns to it. He execrates its awful odor, and proves what an extraordinary weapon of defense this odor is to it, and how powerless are its worst enemies in the face of its suffocating discharge. He gives an illustrative anecdote. He took with him one day a dog of his brother's, a greedy, large brute of force and courage, and found a skunk, and he writes, "For upward of half an hour I sat on my horse vainly cheering on my cowardly follower, and urging him to battle. The very sight of the enemy gave him a fit of shivers; and when the irascible little enemy began to advance against us, going through the performance by means of which he generally puts his foes to flight without resorting to malodorous measures—stamping his little feet in rage, jumping up, spluttering and hissing and flourishing his brush, like a warlike banner, above his head—then hardly could I restrain my dog from turning tail and flying home in abject terror. My cruel persistence was rewarded at last. Continued shouts, cheers, and hand clappings began to stir the brute to a kind of frenzy. Torn by conflicting emotions, he began to revolve about the skunk at a lumbering gallop, barking, howling, and bristling up his hair; and at last, shutting his eyes, and with a yell of desperation, he charged. I fully expected to see the enemy torn to pieces in a few seconds, but when the dog was still four or five feet from him the fatal discharge came, and he dropped down as if shot dead."

Mr. Hudson enters into some suggestive speculations as to the blood-sucking habits of mosquitoes, bringing out forcibly the inexplicable anomaly of a parasitical insect subsisting, for the most of its time, and in the great majority of its representatives, upon water or vegetable juices, and yet possessing the most remarkably perfected apparatus for perforating and extracting the blood of flesh. He says "there is not in all organic nature, to my mind, any instance of wasted energy comparable in magnitude with the mosquito's thirst for blood, and the instincts and elaborate blood-pumping apparatus with which it is related." It seems irresistibly forced upon our acceptance that, from an evolutionary point of view, we must regard the mosquito as an insect that has changed its habit, and yet retains an appetite correlated with a highly organized implement for feeding it, which are an inheritance from a long-distant past, when it preyed upon mammalian tissues solely. Mr. Hudson very strikingly remarks: "In any case, how unsatisfactory is the mosquitoes' existence, and what a curious position they occupy in nature! Let us suppose that, owing to some great change in the conditions of the earth, rapacious birds were no longer able to capture prey, and that, by a corresponding change in their organizations, they were able to subsist on the air they breathed, with perhaps an occasional green leaf and a sip of water, and yet retained the old craving for solid food, and the old predatory instincts and powers undiminished; they would be in the position of mosquitoes in the imago state. And if then fifty or a hundred individuals were to succeed every year in capturing something and making one hearty meal, these few fortunate diners would bear about the same proportion to all the raptors on the globe as the mosquitoes that succeed in sucking blood to their unsuccessful fellows."

The spiders of the La Plata afford interesting subjects of observation to our naturalist, and he advocates a theory of migration to explain the floating hosts of these gossamer bodies in the autumn, when "the whole sky may be filled with visible masses of floating web." Among the spiders he describes a singular species of *Lycosa*, which is swift and most irritable, starting up from its lair at the slightest approach and flinging itself on its intruder. He says that on one occasion, while riding at an easy trot over the grass, he observed this spider pursuing him with rapid leaps and keeping up with the horse. He struck at the resolute little footpad with his whip, when it leaped upon the lash, ran up the handle and compelled the surprised traveler to throw whip and spider away from him.

He describes the felicitous instinct of a small parasitical fly, a species of *Ornithomyia*, which lives upon the body of a small dendrocolaptine bird which, from its habit of gathering together an enormous nest of sticks, is popularly known among the gauchos as the firewood gatherer. This little torment is eagerly hunted for by the bird, but it possesses extraordinary facility of swimming through the plumage of its hosts and almost invariably escapes capture. But when the birds leave the nest this wary parasite does not always accompany them, but remains behind in the numerous lurking spots among the litter of the nest, and then with the abandon of the domestic fly springs upward and "wheels about in the air above the nests, hovering and gamboling together, just like houseflies in a room in summer; but always, on the appearance of the birds, returning from their feeding grounds, they instantly drop down and disappear into the nest." A curious and subtle instinct which makes them fear their host upon whose tissues they are supported! Mr. Hudson adduces a curious illustration to emphasize this singular association. "A man with a blood-sucking flat-bodied flying squirrel concealing itself among his clothing and gliding and dodging all over his body with so much artifice and rapidity as to defeat all efforts made to capture it or knock it off would be a case parallel to that of the bird fly on the small bird."

Two more subjects should be mentioned before leaving this fascinating volume. One is that of dancing birds and the other the strange and weird habit of the huanaco of retiring to a place of seclusion, visited by thousands of his ancestors and companions for the same purpose, wherein to die. "The terrestrial dances, often very elaborate, of heavy birds, like those of the gallinaceous kind, are represented in the more volatile species by performances in the air, and these are very much more beautiful; while a very large number of birds—hawks, vultures, swifts, swallows, nightjars, storks, ibises, spoonbills, and gulls—circle about in the air, singly or in flocks. Sometimes, in serene weather, they rise to a vast altitude, and float about in one spot for an hour or longer at a stretch, showing a faint bird cloud in the blue, that does not change its form, nor grow lighter and denser like a flock of starlings; but in the seeming confusion there is perfect order, and amidst many hundreds, each swift or slow gliding figure keeps its proper distance with such exactitude that no two ever touch, even with the extremity of the long wings, flapping or motionless; such a multitude, and such miraculous precision in the endless curving motions of all the members of it, that the spectator can lie for an hour on his back without weariness watching this mystic cloud dance in the empyrean." He describes the curious saltations of the ypecaha rails, with their vociferous concerts of wild screams; the wing displays of the iacanas and the minuet and attitudinizing efforts of the spur-winged lapwings.

The huanaco, which is a small camel which is widely distributed in South America, has a peculiar instinct of repairing to some lonely, deserted spot when seized with the pangs of death, and, removed from all its healthy companions, succumbing to its last sickness in a sort of dismal yet poetic isolation. Darwin and Fitzroy have noted this strange custom, and Mr. Hudson dwells at some length upon its unique suggestions. "It looks, in fact," he says, "less like an instinct of one of the inferior creatures than the superstitious observance of human beings, who have knowledge of death, and believe in a continued existence after dissolution."

Mr. Hudson is inclined to explain this almost mysterious practice with the huanaco by the assumption of an immense antiquity for the species, and that the inherited habit of a far distant period, when its representatives resorted to some secluded place protected from the assaults of their enemies, has been impressed upon the stock, so that by an automatic movement, when sickened with disease or old age, it turns to the hidden refuge which generations of its kind have sought in the same blind manner.

The numerous observations of the "Naturalist in La Plata" have been barely suggested in this notice. The book will reward all its readers with entertainment and instruction. L. P. G.

IN Germany's public schools stuttering boys are over twice as numerous as stuttering girls.