

THURSDAY, NOVEMBER 14, 1901.

## A CANADIAN NATURALIST.

*Wild Animals I have Known.* By Ernest Seton-Thompson. (New York City: Scribner and Sons.)*The Trail of the Sandhill Stag.* (New York City: Scribner and Sons.)*The Biography of a Grizzly.* (New York: The Century Company.)

MR. ERNEST SETON-THOMPSON, Naturalist to the Government of Manitoba, is an American author and artist whose works enjoy a wide popularity in his own country, but are less known than they deserve to be on this side of the Atlantic. He has written books on the birds and mammals of his State and done other more or less scientific work, but owes his fame, perhaps, rather to three lighter volumes, beautifully got up and illustrated by himself, with the assistance of his wife, the companion in his later wanderings. These are "Wild Animals I have Known," first published in 1898 and already, early last year, in an eighth edition; "The Trail of the Sandhill Stag," and latest, and perhaps most powerful of the three, "The Biography of a Grizzly."

The full-page drawings in all three books are finished works of art, and many of the little marginal sketches—scraps of boughs and berries, and suggestions in a few strokes of footprints in the snow and woodland and mountain scenes—would have delighted Ruskin.

At one time in his life a wolf-trapper, Mr. Seton-Thompson is, in the highest sense of the word, a field naturalist; and, gifted with a poet's imagination, has identified himself, with a completeness which few writers have reached, with the wild creatures whose lives and surroundings he paints. The key-note of his writings is struck in the preface to the first of the three books:—

"A moral as old as Scripture, We and the beasts are kin. Man has nothing that the animals have not at least a vestige of, the animals have nothing that man does not in some degree share. . . . They surely have their rights."

When caught hand and foot in wolf traps which he had been carelessly setting, and from which in the end he was freed only by the intelligence of a faithful dog, who, after one or two fruitless attempts to help him, brought him the trap wrench which had lain just beyond his reach, he remembered as the prairie wolves howled round him, drawing closer and closer, "how old Giron, the trapper, had been lost, and in the following spring his comrades found his skeleton held by the leg in a bear trap," and a "new thought came to him"—"This is how a wolf feels when he is trapped." "Yan," in "The Sandhill Stag," alone and far from help of any kind, on the trail of the muckle hart, in the mid-winter moonlight hears across the frozen snow the gathering hunting cry of the wolves, nearer and nearer, until it suddenly flashes upon him, "It is my trail you are on! You are hunting me." When at last within fifteen feet of "the great ears and mournful eyes" of his tired-out quarry, he remembers how he felt then, and cannot shoot. He had "found the Grail," and "learned what Buddha learned" more than 2000 years ago.

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Where all alike are excellent, none can well be best; and of the wild animals which Mr. Thompson "has known" and writes of it is not easy to make a choice.

There is the "Springfield fox," who shook the dogs off when she thought proper by "the simple device of springing on a sheep's back," and who, when, in spite of gunshots, she had tried for three nights to bite through the chain which held her cub, and found all her attempts to free him useless and danger faced for nothing, brought him poison and was never again herself seen or heard of in the neighbourhood.

There are "Wully," the four-legged Jekyll Hyde, a faithful sheep-dog by day; and at night a treacherous, bloodthirsty monster, who, when found out, flew straight at the throat of the girl to whom he had always professed especial devotion; and "Silverspot," the canny old leader of the band of crows which had their headquarters on a pine-clad hill near Toronto; and others, not less interesting, sketched by a master-hand.

The most striking figure in the first book, second only, if second, to the grizzly who has the honour of a volume to himself, is "The King of Currumpaw," a great wolf who, with his pure white mate and a chosen band of five, all wolves of renown, terrorised one of the vast cattle ranges of New Mexico, and with a price of 1000 dollars on his head—an unparalleled wolf-bounty—scorned all hunters, "derided all poisons, and continued for at least five years to exact tribute from Currumpaw ranches to the extent, many said, of a cow each day."

The band seldom condescended to eat mutton, confining themselves almost entirely to the best cuts of year-old heifers; but for the mere fun of the thing stampeded and killed sheep by hundreds.

Mr. Thompson gives an instance of the grim bandit's diabolic cunning which came under his own observation.

"Sheep," he writes, "are such senseless creatures that they are liable to be stampeded by the veriest trifle, but they have deeply ingrained in their nature one, and perhaps only one, strong weakness, namely, to follow their leader. And this the shepherds turn to good account by putting half a dozen goats in the flock of sheep. The latter recognise the superior intelligence of their bearded cousins, and when a night alarm occurs they crowd around them, and usually are thus saved from a stampede and are easily protected. But it is not always so. One night in last November two Perico shepherds were aroused by an onset of wolves.

"Their flocks huddled around the goats, which, being neither fools nor cowards, stood their ground and were bravely defiant; but, alas for them, no common wolf was heading this attack. Old Lobo, the weir-wolf, knew as well as the shepherds that the goats were the moral force of the flocks, so hastily running over the backs of the densely packed sheep, he fell on these leaders, slew them all in a few minutes, and soon had the luckless sheep stampeding in a thousand different directions."

It was not until "the grand old outlaw" had lost his consort and become reckless, following her body to the ranch-house and tearing the watch-dog to pieces within fifty yards of the door, that he met his end at the hands of his biographer, who had come by special invitation to the Palette Ranch to match his cunning with the great wolf's.

"Wahb," the hero of the book last on the list, is, like the king wolf (whose portrait, admirably drawn—"Lobo,

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Rex Corruptæ"—appears at the end of his memoir), a real character—a sullen and solitary bear of enormous size, responsible for the deaths of at least two cowboys, and believed never to have had a mate. He was known far and wide over a broad district of New Mexico as "the worst grizzly that ever rolled a log in the Big Horn Basin"; but in the Yellowstone, where for some years he regularly passed two months in summer, and where, as in our London parks—to compare small things with great—wild things at once grow tame, he managed to pass himself off as "a peaceable sort."

From facts gathered from hunters, miners and ranchmen, and from personal experiences, Mr. Thompson has imagined and written his life through "cubhood," "days of strength" and "waning," from the time when he and his two brothers and a sister—an unusually large family for a grizzly—as woolly cubs "hustled and tumbled one another in their haste to be first at the ant-heaps which a mother's strong arm unroofed, and squealed like little pigs, and growled little growls, as if each was a pig, a pup and a kitten all rolled into one," until the time when, a grey-bearded old bear, crippled with rheumatism, dethroned and driven from his haunts by a usurper whom a year or two before he would have despised, he limps "with shaky limbs and short uncertain steps to the mysterious 'Death Gulch'—that fearful little valley where everything was dead and where the very air was deadly," and "as gently went to sleep as he did in his mother's arms by the Gray-Bulls long ago."

It is a powerfully written and wonderfully graphic story, more particularly in the earlier chapters, where the poor little cub, sole survivor of the family, wanders motherless in the woods, with all the world against him, to learn by the slow lessons of experience all about traps and guns and beasts and, worst of all, men, and the meanings of the many subtle messages which reached the brain by way of his "great moist nose," storing up wrath against the day of vengeance, which came with his strength.

One of the most interesting things in the book is the account of the way in which a big bear, when he takes possession of a country, advertises his proprietary rights by rubbing himself, whenever he passes, against particular trees.

"Wherever Wahb went he put up his sign-board—

'TRESPASSERS BEWARE!'

It was written on the trees as high up as he could reach, and everyone that came by understood that the scent of it and the hair in it were those of the great grizzly Wahb."

A critic, to assert his superiority, must pick holes somewhere. Perhaps in the case of Mr. Seton-Thompson's almost altogether perfect work, the least unreasonable way of doing what is expected is by hinting a doubt whether the vein of melancholy which runs through much of his writings is not a little strained.

"The life of a wild animal," he tells us in italics, "always has a tragic end." Perhaps so; if, but only if, sudden destruction coming unawares to end a bright existence—Death appearing without "the painful family," "more hideous than their Queen"—is necessarily a tragedy. But the world, after all, is something more than a great slaughter-house. There is, for the humbler

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creation at least, a "blindness to the future kindly given," and, so far as we can judge, a keen power of enjoying the present. The blackbird is not always thinking of the sparrowhawk, the ant of the turkey, nor the turkey of Christmas. The necessity for keeping the protective sense constantly on the alert may be the very best means for keeping the faculties of enjoyment bright and polished.

"A certain number of fleas," according to David Harum, "is good for a dog. They keep him from brooding on being a dog." T. DIGBY PIGOTT.

### ELEMENTARY GEOMETRY.

*Elementary Geometry, Plane and Solid, for use in High Schools and Academies.* By Thomas F. Holgate, Professor of Applied Mathematics in North-Western University. Pp. xi+440. (New York: The Macmillan Company. London: Macmillan and Co., Ltd., 1901.) Price 6s.

THIS book covers the ground of the first six books and those parts of the eleventh and twelfth books of Euclid which are usually read; and it includes besides a discussion of the elementary properties of the simpler solid figures, the sphere, the cylinder and cone. There is also a brief appendix on trigonometry.

The introduction deals with preliminary notions and definitions, and the first chapter with triangles and parallelograms. The second chapter treats of the circle in a manner which is more direct than Euclid's, and is free from the impossible figures so bewildering to a beginner. It contains an interesting Article 204, on the principle of continuity, in which instances are given of propositions which, though very different at first sight, can by the application of the principle of continuity be harmonised under one general statement. Illustrations of this kind are most helpful and stimulating.

The third chapter, on similar rectilinear figures, contains a section on measurement, ratio, proportion and the theory of limits. As no definite agreement has yet been arrived at among teachers as to the best mode of treating this part of the subject, it is to this section that the main interest of the book is due. There is much to be said for the view of those who would definitely postpone any discussion of incommensurables to a later stage, but as it may be inferred from the book that this is not the view of the author, it will not be considered here. In order to make clear the relation of his treatment to the usual English practice, it is necessary to state very briefly what that practice is. It is usual to direct beginners to learn the fifth definition (the test for equal ratios) by heart without any adequate explanation,<sup>1</sup> although it rests upon ideas of extreme simplicity. It is doubtful whether one pupil in ten thousand understands the definition, though a great many are able to apply it correctly to prove two important propositions in the sixth book, viz., No. 1, "The areas of triangles (and parallelograms) of the same altitude have the same ratio as the lengths of their bases have to one another," and No. 33, "In equal circles, angles, whether at the centres or circumferences, have the same ratio as the arcs on which they stand have to one

<sup>1</sup> The so-called algebraic explanations frequently supplied are inadequate