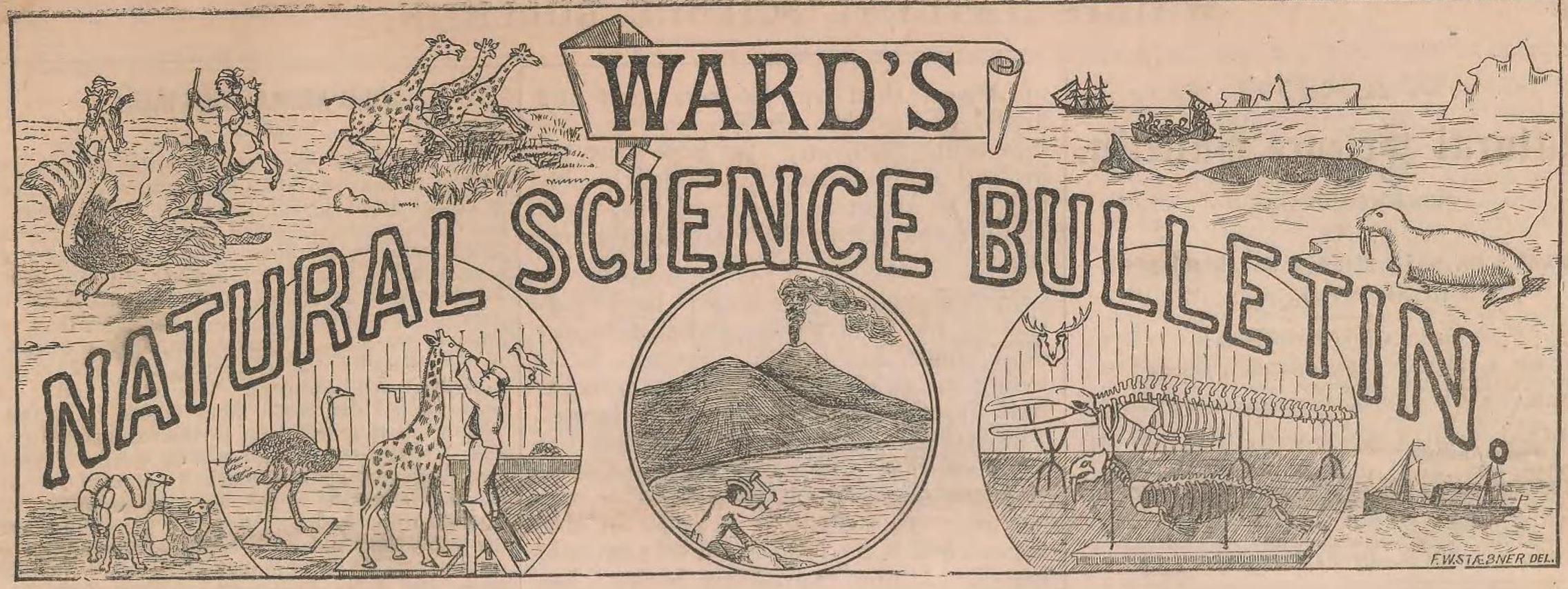

VOL. III, No. 2. ROCHESTER, NEW YORK, JULY 1, 1884. Price, 50 cents per Year.

TABLE OF CONTENTS.

Didelphys Dorsigera.

A gentleman recently purchased a bunch of bananas in Rochester, N. Y. On taking the fruit from the stem he found a small female opossum, (*Didelphys dorsigera, L.*) which had come all the way from Surinam in the little nook it had found in the fruit cluster. It was accompanied by six young, all clinging by their naked, prehensile tails to their mother's tail, which was thrown forward over her back. Five of the young died while weaning, the sixth was eaten by the mother.

Sweet little Meg came into her Sunday-school class one morning, her eyes filled with tears, and looking up into her teacher's face, said: "Our dog's dead, and I guess the angels were real scared when they saw him coming up the path, for he's awfully cross to strangers."

The Rochester Robin.

BENJ. F. TAYLOR IN NEW YORK TRIBUNE.

A Rochester robin has built its nest on the main frame of an engine of the New York Central Railroad. The engine runs daily between Rochester and DeWitt, but the bird occupies the nest.

A Rochester robin alighted one day
On a bar or a brace of the wonderful thing
That mills the swift miles like grain in its way,
And flies like a bird, though it never takes wing.

And the Rochester robin said to herself,
"What a place for a nest, so strong and so warm,
As neat as a pin and as shiny as delf,
Up out of the danger, in out of the storm.

And her mate by the roadside struck up the old lay,
He sang for the apple-tree blossoms to dance,
The girlish white blossoms in pink *applique*,
More fragrant and fair than the lilies of France.

The heart of the engine was cold as a cave,
The furnace door grim as the grate of a cell;
And dumb as the church under Switzerland's wave,
Like a tulip of gold the glittering bell.

Then the stoker swung wide the furnace's door,
Stirred up the dull fire, and the robins just said,
"Summer weather to-day!" Then rumble and roar
Played the water's hot pulse with the clouds overhead.

"I am sure it will rain," he sang to his mate,
"It thunders and lightens, but work right along,
The house but half done and the season so late—
"How cloudy it grows." So he kept up the song.

And the twain fell to work, bore timbers of straw,
And fibres of wool caught on thistle and thorn;
And wrought them all in by the Lord's "higher law,"
With threads of the laces some maiden had worn.

Then *clang* swung the bell and the warble was hushed,
And the crazy sparks flew as if the storm tore
The small constellations aside and asunder;
While the engine along the steel parallels rushed.
The birds watched it all with innocent wonder—
"Who ever saw stars in the day-time before?"

Then she cried, and he said, "the gale is so strong,
I think the whole world must be blowing away!"
She trusting replied, "cannot last very long,"
And kept on with her work far sweeter than play.

To and fro, far and near, their fiery world went,
The cup of their love brimming over with life;
And the engineer stood at his window intent
And watched the steel rails, the red-breast and wife,
And declared, by his engine and honor he would
Be the death of the man, big or little, who should
In the height or the depth of his gracelessness dare
"To meddle or make" with his passengers there.

Ah, brave guests of the foot-board, ticketed through
All weathers and times till the end of the run,
The Lord of the sparrows who is caring for you,
And the Lord of all realms forever are One.

A variety of Fluorite (chlorophane) from Hunter Co., Va., is so phosphorescent, that if placed in a vial of warm water, it will show plainly in the dark a pale green light. A cut stone of the above was recently displayed at a meeting of the New York Academy of Sciences, probably being the first gem cut that phosphoresced without any great heating.

THE PREPARATION OF SMALL MAMMAL SKINS.

This question of what is the proper method of preparing small mammal skins, is one that is well worth our careful attention. While handling many of these skins, I am constantly finding those with imperfections, either owing to improper care when first procured, or from ignorance or neglect in skinning. In some cases, when the skin is relaxed for mounting, the hair comes out to such an extent that the specimen is worthless, and in many cases this difficulty lies in the feet and tail, which parts need as careful attention, and in many cases more care than the rest of the specimen. The following hints have been gathered from some of our best collectors and most experienced taxidermists, and may be of interest to the readers of the "Bulletin."

When a small mammal is captured, the skin should be removed at once. If time cannot be taken to do this, open the specimen on the belly and remove the intestines, putting a piece of cotton saturated with carbolic acid into the opening, and also treating the mouth in the same manner. When prepared in this way a specimen will keep for one or two days without being skinned, but must not remain longer than two days. Cut your specimens along the belly, from the lower part of the throat to the tail, skinning carefully on either side, great care being taken not to stretch the skin. Leave attached to the skin the Humerus, Radius and Ulna on the fore, and the Femur, Tibia and Fibula on the hind feet. Do not cut the skin on the legs, but turn them well to the wrists and ankles, being very careful not to cut through the tender skin. The leg bones must be very thoroughly cleaned, then wound with a little cotton or tow, so as to prevent the bones from coming in contact with the skin; which, if allowed, would very probably result in the ruin of your specimen, owing to the oily substance which oozes from the bone and rots the skin. In wrapping the bones be careful not to make the leg larger than the natural size, which stretches the skin, and is either stuffed incorrectly or a piece is taken out which makes it more difficult to get a satisfactory result. The bone should always be removed from the tail without breaking or cutting the skin. This may be done by taking two sticks the size of a lead pencil (but not round) and place them on either side at the root of the tail, holding them firmly in the left hand at right angles to the tail; while with the right hand grasp the carcass and tail vertebrae, then pull them steadily out. If the tail does not slip easily, cut around the base and with a little care you can remove the caudal vertebra. This method can be used with mammals the size of a fox. When the tail has been properly cared for, it saves the taxidermist much labor and the specimen gives better satisfaction when mounted. We will next turn our attention to the skull, which should be taken entirely from the skin, care being used not to injure the eyelids or nose when removing. Clean the skull thoroughly, then fasten it to the neck or one of the legs, having first wrapped it in paper to prevent it from coming in contact with the skin, thus when the dentition or other portions of the skull are desired to be examined, the skull is easily accessible, and it is very important to have the skull where it can easily be examined, for in many cases it is absolutely necessary to examine the skull in order to determine the species of your specimen. The skin being removed and prepared as above, must now receive some treatment which will properly preserve it; and we find nothing better than a mixture of salt and alum, rubbed on all parts of the inside of the skin, being careful to get plenty of the mixture in the tail; also open the balls of the feet, so that the salt and alum can thoroughly penetrate and preserve the skin, preventing the hair from coming out. Use about one-third alum and two-thirds salt. If care is taken to keep the skin in a tight box after being thoroughly dried, and camphor or some other insecticide be used to keep it from the devouring appetites of the moths and other insects; it will not be necessary to use any other preventive than the treatment of salt and alum; but unless great care is taken, arsenic must be used. Before putting your skin away, partly fill it with *dry* grass, or cotton, taking a few stitches in the edges of the skin, drawing it together in as natural a shape as possible. Never let a skin dry in the sun or by the fire, and always leave it with the fur side out. I must not leave this subject without saying a few words on preserving specimens in alcohol, which is done by simply taking the specimen when procured, and cutting it on the belly, also opening the balls of the feet, and then dropping it into 75% alcohol. I would give the following reasons for keeping skins or entire specimens in this manner. 1st. You can collect more specimens in a day, owing to the fact that no time need be taken in skinning. 2nd. In some climates your specimens are very hard to keep, unless they have immediate and careful attention, and by the use of alcohol this difficulty is overcome. 3rd. When you desire to use a skin it is always relaxed, and in case you have an entire specimen, the form is preserved, which enables you to take careful measurements before skinning: the preservation of the nose and other parts of the face is very desirable, especially in rare forms. You also preserve the skeleton as well as the skin, in case you desire to use it. When alcohol can easily be carried, we highly favor its use. C. D. C.

The Tygar

A ZOOLOGY OF 1748.

Hill's History of Fossils, noticed in the last Bulletin, was one of a series of three volumes, the whole forming a complete treatise on Natural History, and containing descriptions of all animals, plants and minerals that were known in the year 1748. The second or Zoölogical portion of the work is entitled "The History of Animals," and beginning with "Animalcules" ends with "Quadrupeds." Spite of the great increase of knowledge since the time of Hill, it is impossible to read this second volume carefully without coming to the conclusion that he was a careful and painstaking Naturalist, who only escaped celebrity by having been born a century and a half too soon. Of course there are many things in his work which strike us as amusing, but so careful was Hill in his statements that his History of Animals contains far less of fiction than does the popular work of Wood. Like a second St. George, Hill had a tilt with the dragon and came out victor by conclusively proving that such a creature had no existence, save in the brains of its describers. The origin of the fable of the Barnacle Goose is explained and the fact noted that the fish *Coryphaena* and Cetacean *Delphinus* are both called Dolphins, a confusion of names which has caused much needless discussion of the fact that the Dolphin changes color in dying. Hill's classification seems a very queer jumble, but it should be borne in mind that the older naturalists—and for that matter a goodly number of recent ones—classified animals entirely by their external characters. And if so late as 1869 Dr. Gray put the Echidna and Ornithorhynchus among the Edentates, we must not be surprised to find that in 1748 the whales and sirenians were grouped with the fishes,* although our author notes that they form but a single series, readily distinguished by their transverse tails, that they breathe by means of lungs, and are viviparous.

*Note—After all, this is not much worse than the statement found in every other Zoölogy of to-day that the whale *spouts water*.

Of the Manatee he says, "this singular creature seems to be the link in the great chain of beings uniting the fish and the quadruped tribes" * * * * and that "it is probably from an imimperfect view of this fish that the opinion of Mermaids, mermen and syrens first arose."

The highest divisions in Hill's system which correspond to our classes, are termed irrespectively families or tribes, the term class being used as we now use order, the whales for example being termed the Class Plagiuri. The only named divisions smaller than these "classes" are genera and species, but we find families foreshadowed in a sentence occurring at the end of the introduction to fishes, * * "the very numerous ones (species) arranged under the Malacopterygious and Acanthopterygious series, have natural and obvious classical distinctions under those of the series and above the generical." What the state of Zoölogical classification *had* been may be guessed at from the fact that the Manis is spoken of as having been formerly placed with the Reptiles (Amphibious Animals), although Hill raised it from this low position and correctly placed it near the Anteater. The bats are also taken from among the birds and placed with the Quadrupeds. Hill was no modern hair-splitting systematist in his views of what constituted a species, since he considered *all* the bears as forming but one species which "towards the pole is large and white and in other places is smaller and of a black or rusty brown." Would that some of our more modern naturalists had been blest with a little of this breadth of view. Whenever it was possible, animals were described at first hand, but for some of his descriptions he was forced to draw on other authors, and consequently should not be credited with *all* the errors in his book. Up to 1748, no Giraffe had been brought to England, and in fact it is doubtful if any had been seen in Europe since the date of the Roman Empire. Even so late as 1770, many naturalists doubted the existence of such an animal, and we are not surprised that Hill's description and figure (taken from Bellonius ?) are somewhat quaint. Careful as Hill usually was not to exaggerate the size of an animal—indeed many are described *under* their full size—he yet breaks this rule in one or two instances, as where in speaking of the Elephant he says that the height of a full-grown specimen is from seventeen to twenty feet. He also states that the Elephant has no epiglottis, so that it would be easy for any small animal to enter the lungs by way of the trunk, and in order to guard against this the creature sleeps with the extremity of the trunk so closely applied to the ground as to admit air only. "The soals of the feet are not covered with any thing horny or firm, but with a mere skin, and this indeed thinner than that of the rest of the body, and easily cut through with a knife." The Rhinoceros is credited with a height of fourteen feet and the head described as so bulky that the creature seems to find pain in holding it up, and is always seen in the wild state with it in a depending position.

Plate 28 Page 574

The Rhinoceros

The figure of the Rhinoceros is, with one exception, the most singular of any given, although at the date of writing there was one on exhibition in London, and also an Elephant. None of the anthropoid apes were personally known to Hill, only one or two having been brought to England up to that date, but he was acquainted with several of the Baboons and

among these the Barbary Ape seems to have produced quite an impression on him. He call it the Satyr—*Simia acauda, subtus glabra*—and remarks in a manner worthy of Mme. de Stael; "this species has an unlucky resemblance to the human form, * * the face has no hair and carries a too striking resemblance to the less beautiful of our own species." The most singular errors in the book are in the localities ascribed to certain animals. Various monkeys are with rare impartiality assigned to both the East and West Indies, which is a little worse than the elasticity of the term Indies, as used by French dealers. The Manis is said to come from Africa and the Three-banded Armadillo (*Tolypeutes tricinctus*) from Africa and South America. Birds of Paradise come from Arabia, and worst of all the Two-toed Sloth from Ceylon only. But with all its defects the History of Animals is—taking its date into consideration—a good work, and we wish that all modern authors would use their materials with the same care and judgment as did John Hill. A word in conclusion as to the plates, which are little if any worse than those in a recent popular work on natural history. Many of them were drawn from living animals, others reconstructed from skins, and still others evolved from description. But many of the birds were unmistakably copied after stuffed specimens, certain peculiarities of the unskilled taxidermist being very evident.

F. A. L.

The Art of Labeling.

The more we see of public and private museums, the more we are impressed with the insufficency of the labels; with the opportunities for the usefulness of the collections, in various directions, that have been totally ignored and irrecoverably lost. An absolutely perfect label is a thing not to be expected. But there are a few well known points, familiar to every scientific collector, and looked for by nearly every naturalist who sees the specimens, which, nevertheless, are omitted from the labels of three-quarters of the collectors. We will undertake to present these in brief, believing that if they were more generally followed the scientific value of many a collection would be doubled.

Give the *scientific* name of the specimen and the authority for the name. If you can't name your specimen on no account let this deter you from affixing a label. The authority greatly facilitates fixing upon synonyms, which are of'times necessary evils. To illustrate; the genus *Centropus* contains the specific name *senegalensis* applied by L., Rupp., Finsch. & H., and Sundev. to as many separate birds. The next sub-genus, *Centrococcyx*, under *Centropus*, contains *philippensis* by Cuv., Horsf., Tem., and Swinh. Nor are these exceptional cases; we might casily cite a hundred such. But this is sufficient to show any one the *absolute necessity* of citing their authority unless positive that they are using the same works used by their correspondents.

Note down the sex, if it be a specimen having sex. Sexual variations are of much importance to the naturalist.

Give the size, if this can not be as easily obtained at *any* subsequent time.

If belonging to the organic kingdom, write the date at which collected. This will prove of use as indicating seasonal changes and (among some animals) time of migration.

If an animal, note color of eyes and any exposed patches of skin—the descriptive naturalist and the taxidermist will bless you for this.

Most important of all, write the locality from which the specimen was obtained. It is of great help in naming specimens and of extreme value in the study of geographical distribution, and climatic and geographical variations.

If your specimen is to go into alcohol, write on a label that will not separate into a multitude of thin sheets. Be sure that your ink is thoroughly dry, or write with a soft lead pencil; but don't use an "indelible" blue pencil, else the writing will wash out. Write your label legibly and in clear concise language.

Fasten the label securely *to the specimen* or it will certainly be lost.

H. L. W.

The Fin Back Whale.

Balaenoptera musculus.

Though known from time immemorable and for centuries captured by man, though distributed through every sea and frequenting every coast; yet of no families of mammals is the literature so unsatisfactory and the scientific knowledge so scanty as of the whales: the largest mammals that ever lived.

Whalers, who are supposed to know all about these animals, are deplorably ignorant in regard to their anatomy; not one in ten being aware that there are any bones in the flippers; and if shown a picture of a whale, insist on turning it wrong side up.

Concerning the skeletons of these animals, it is a curious fact that while even a fœtus may have all the phalangeals and carpals present, yet an adult may have several of these bones missing. A skeleton of a fifty-three foot male Fin Back, that we have recently obtained, has one more phalanx in each of the four digits of its right manus than appears in the other manus. The estimated weight of this animal was fifty tons, comprised almost entirely of muscular tissue, for the carcass yielded but 8 bbls. of oil. Our specimen has perfect baleen, an unusual thing in most museum specimens. We offer this skeleton nicely mounted for one thousand dollars.

CAPYBARA HUNTING ON THE ORINOCO.

The great delta of the Orinoco River abounds with capybara in many localities, and we were a good deal interested in the chase of this very interesting mammal. The *Hydrochœrus capybara*, or "chi-guí-re" of the Venezuelans, is the largest of the Rodents, an adult male measuring about eighteen inches in height and four feet in length; it has teeth like a squirrel, lips like a hare, a body very much like a hog, thinly covered with grayish, bristly hair, no tail, and feet peculiar to itself; large individuals will weigh a hundred and forty pounds. They are quite harmless, almost wholly incapable of defense, and when attacked their only refuge is the river, from the margin of which they never stray more than a few yards.

The flesh of the capybara is very good eating, tender, juicy and of a peculiar flavor, and the inhabitants of the delta eat it all the year round in lieu of beef, pork and mutton. The meat is also good when salted and dried, and it was when Señor Sanchez and old Don Pancho went off on a fortnight's hunt for capybara, to procure a supply of dried meat, that we accompanied them to assist in the chase and to procure some skins and rough skeletons for the "Science Establishment."

We started in three dug-out canoes, two of which were small, very light, carried neither cargo nor passengers, and were calculated for gymnastics in the water when it came to catching the capybara. In the stern of one sat Don Pancho, with a broad paddle, in the bow sat Antonio, with a paddle and a sort of a lance, and in the stern of the other light canoe sat Señor Sanchez, with both paddle and lance. Along the tangled, grassy bank of the river ran five good, stout, wiry dogs, trained especially for capybara hunting. The lance used is a half lance, half harpoon, on a very small scale; the head is simply a little iron spike, about four inches long, with a single barb at the point; the upper end is rather loosely set in the end of a long, straight, and very light reed, about the size of one's wrist, and six feet in length; the iron spike is intended to come out of the handle as soon as the capybara is struck, and is therefore attached to the reed by a stout little cord, a foot long.

The dogs scramble along the bank through the rank grass, tangled vines and roots, usually keeping close to the edge of the water; sometimes the bank is eight or ten feet high, sometimes quite low.

The two light canoes keep close to the dogs, one usually going a little ahead of them, the other a little behind; we bring up the rear in the big canoe, the "courayara grande," which contains the entire camp and hunting outfit for us all, and is roofed over along the middle. The sun is shining brightly, without being too hot, a steady breeze is blowing, and we are anxious for a sight of a capybara.

Hark! The dogs have found game and are barking furiously; something comes tearing through the high grass toward the river, there is a spring, a booming plunge head first into the river, and *plunge! plunge!* two more dark bodies shoot head first off the bank and several yards out into the river. "Chiguiri! chiguiri!" One large one and two smaller ones; an instant later the dogs emerge, and stand silent and panting at the water's edge. The light canoes are instantly on the move and take positions about forty yards out from the spot where the capybara took their leap. Antonio rises cautiously and poises his spear ready for a throw; Señor Sanchez holds both his paddle and spear ready to use whichever is required; we wait a minute or two very anxiously for the capybara to come up. "There! there! there he is!" One has come up to breathe, but much further out than the canoes. Instantly they make for him, fairly skimming over the water; only the top of the animals head is visible—nostrils, eyes and forehead—scarcely more than a spot on the water; he waits quietly a moment to breathe; now that the canoes are nearing him, he turns and begins swimming rapidly away; they have gained on him; Antonio makes ready to throw and the capybara dives; on go the canoes for a few yards, and we wait a minute more for the doomed animal to come up. "There he is! there he is again!" close to Señor Sanchez' canoe; the Señor drops his paddle, sits still and throws his spear at the capybara. Missed! The animal dives quickly and the spear floats like a cork on the water; up comes the quarry again, visibly exhausted; Don Pancho makes for him; he dives again; the canoe keeps on, and the capybara rises again almost directly, quite exhausted; Antonio gives his spear a slight toss, aiming just behind the capybara's head, the point strikes fairly on the hind quarter, and holds fast; instantly the capybara dives, the iron spike comes out of the socket, and the reed floats on the surface of the water; we see only the hind legs of the capybara, kicking wildly; but the string holds the spike fast, and the poor brute has not power enough to drag the reed under.

The canoe glides up and Antonio seizes the reed. Now he has the hind legs of the "chiguiri," and Don Poncho comes to his assistance; they manage to get the head to the top of the water, when Antonio seizes a short, round club from the bottom of the canoe, and whacks the capybara over the top of the head; the head goes down; up again, and whack! whack! the club comes down upon the capybara's defenceless head; the skull is fractured or caved in entirely; a New York policeman could not have done it better. As soon as the quarry ceases to struggle, it is tumbled into one of the canoes and carried along until a suitable time and place is reached for skinning or skeletonizing, and the curing of the meat.

We cannot help feeling sorry for the poor brutes after all; they have no protection or means of defense on land, and they are not amphibious enough to escape in the water, unless under very favorable circumstances; very often they do manage to get away somehow, and where the water is full of grass and aquatic plants, growing well above the surface, along the margin, it is almost impossible to take them. One day we started over thirty individuals in such a place, and we got only two out of the lot.

During that fortnight's hunting we killed over seventy capybara, mostly of large size; we shot a few on the bank, but all the rest were taken in the regular way. Sometimes, when hard pressed by the dogs, they took astonishing leaps into deep water, going off the high bank and flying through the air as though shot out of a cannon. The dogs always started them when feeding on the banks, and compelled them to take to the water. Going up the narrow creeks, we kept a party of dogs on each side, and so swept them clean of capybara as we went, although we killed but a small proportion of what we saw.

W. T. H.