## Scientific American.

THE PASSING SHOW. BY CHARLES F. HOLDER.

No more interesting study, for the laymen or man of science, can be found than the effect of civilization upon the fauna of a continent. In America the results have been so marked and far-reaching that it is of more than ordinary interest. Within comparatively few years some types of animals have been almost



THE CALIFORNIA VULTURE.

extermnated, others constitute a passing show, and without the most stringent rules and regulations they will soon disappear.

Among the most interesting birds on the Pacific slope is the California vulture-Pseudogrypus Californianus which well represents in North America. the great condor of the Andes, and exceeds it in stretch of wing, but not in bulk. I have seen this fine bird soaring high above the Sierras, and once succeeded in creeping upon a specimen which had come down into the lower country, and was in a grove of live oaks at an altitude of about 1,000 feet, in the San Gabriel Valley. I laid in the cover for some little time watching this great American vulture, which with head well up, its big wings drooping, presented a fine picture. I satisfied myself with aiming at it, then came out of my concealment to drive it away, knowing that the first pot hunter who came along would bag it as the bird was in demand by the insatiate curiosity dealers who have a price on the head of every bird. The great vulture slowly moved away with ponderous flight, and I watched it rise higher and higher in great circless congratulating myself on having aided, in all probability, in the preservation of at least one individual, A week later, however, I learned that a California vulture had been shot in the same grove by a sportsman, and brought to town, where it was sold to the highest bidder.

That the bird is destined to extinction is evident from the fact that every collector or curiosity dealer has a standing offer for all the birds and eggs they can get. Thirty or forty years ago these birds were so common that it was not unusual for the Mexicans to catch them with a lariat, roping them after the vultures had gorged themselves with food. I once had access to a large South American condor which I found very amenable to the taming process. After some weeks it came to know me, and would hold up its head to be scratched, like a dog. The living California vulture

DESTRUCTION OF ELK IN WINTER.

that it was my good fortune to see appeared to be quite as heavy and powerful a bird, though there is no doubt that the Andean form is the superior in this respect. As to their strength, Dr. Cooper states that four could drag the body of a young grizzly bear, weighing 100 pounds a distance of 600 feet. Dr. Newbury observed these birds in the Sacramento Valley in 1856. and refers to their fine soaring powers; and Dr. Canfield states that he has seen as many as one hundred and fifty vultures around a dead antelope in the Columbia River region. Southern California to-day is undoubtedly the principal retreat for the great bird, which will be hunted in the winter from peak to valley, and from one live oak grove to another until they too have joined the majority.

The disappearance of this bird can be traced to different causes: first, the pot hunter, who goes forth to kill everything; second, the collectors, who sell their "game," from blue birds to vultures, to curiosity dealers; third, poisoned meat set for coyotes and bears, and fourth, Mexican miners in Lower California, who it is said, destroy the bird solely for their plumes in the hollow part of which they deposit gold dust.

Among the doomed animals are the antelope and elk. A few years ago the plains of California were covered with antelope. Even so late as fourteen years ago hunters could find them in the old dry lake bottoms in the vicinity of Mojave; and fifty years ago the great San Joaquin Valley supported many bands. But the advance of the white man into the West has been fatal; they have been shot down, driven away, murdered in cold blood for their heads alone, and to-day are on the verge of extinction in California. As to the actual numbers in this State, Mr. H. W. Keller, State Fishery Commissioner, wrote me: "The only antelope I have seen or heard of are in the following localities. In the Mount Shasta foothills, about forty miles east of Yreba, Siskiyou County, I found about seventyfive head in small bands, running in the timber entirely, something unusual for this animal. There is also a small band in the western end of Antelope Valley, possibly less than twenty in all. There may be some in the counties bordering on the Nevada line, but of this I am not sure. I do not think that there are five hundred antelopes in the State."

The elk is disappearing so rapidly, despite the efforts on the part of the government to save them, that it

would hardly be an exaggeration to say that within twenty years there will not be one left outside the limits of the National Preserves. . Even this retreat is not a protection, and pot hunters and renegades haunt the borders, drive game into the open country and slaughter it. Elk in the terri tories and interior States are hunted in the deep snow of winter, made to "move on" from post to pillar, as shown in the accompanying photograph, until they, too, become but a memory. Fifty years ago elk could be found plentiful in California; and two hundred years ago the animals ranged the State and far into Lower California and everywhere over the great valleys, judging by the antlers found. How it is to-day Mr. Keller writes me

as follows: "The only elk I know of in this State-California-are a few in the northern part of Humboldt County, and about one hundred and fifty in Kern County, west of Bakersfield."

Fifty years ago the fine natural harbor on the southwest coast of the Island of Santa Catalina, gave shelter to what was perhaps one of the largest herds of the California sea elephant-Macrorhinus angustirostristhen known, the largest of its tribe, many of the hulls attaining a length of 22 feet. It was a striking and conspicious object, and naturally attracted the atten-

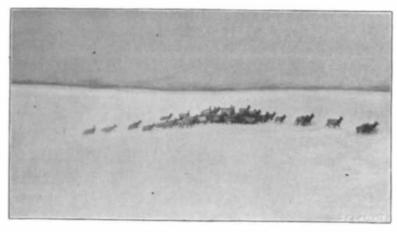
> tion of the whites who immediately began a war of extermination, the animal being very valuable for its oil, the large bulls affording two hundred or more gallons. The animals were very plentiful at this time from latitude 25° to 35°; but the war of extermination began about 1852, and the present decade has, in all probability, seen the last of the animals. The government recognizing the inevitable, sent an expedition to Lower California a few years ago, and secured all the sea elephants they could find; and the oil hunters have since then completed the work, and it is believed that this fine animal is extinct. Even in 1860 they were rare, and the history of their passing is not without in

terest. In 1880, it was rumored in San Diego that a fewlof these animals had been seen at Gaudaloupe and San Benita, and forthwith an expedition was planned to wipe them out. In that year the crew of the schooner "San Diego" killed thirty at San Cristobel Bay. Two years later forty were killed by another party, and six young ones were secured. In 1883, the American hunters rallied to the slaughter, the Mexican government offering no resistance, and killed one hundred and ten, fourteen being large bulls. Everything in sight was destroyed - males, females and

In 1884, the crew of the sloop "Liberty" killed ninetythree. These men had sentiment enough to leave a few females and young; but it was a mistake, as some weeks later another boatload of exterminators came along and slaughtered what was left of the herd. The government then sent Mr. Charles H. Townsend to secure what animals might have remained. He visited all the localities in Lower California, which had formerly given shelter to these animals, but found none until they came to San Cristobel Bay where there was a herd of fifteen, these being killed in the interest of science. These were probably the last of the

One of the most remarkable animals on the Pacific to disappear before the advance of man within the past one hundred and fifty years, was the rhytina, or sea cow-Rhytina gigas-which was discovered by Bering in 1741 on the island that was given his name. The surgeon of the wrecked party has left an interesting account of this Arctic manatee-an extraordinary animal, which attained a length of 30 feet and a weight of eight thousand gounds. The animal was found in herds about the mouths of streams, and being a cluinsy creature, with no means of defense, easily became a victim to the party, who speared them for food. So vigorous was the warfare against it carried on that in nine years the five herds on Copper Island were extirpated; in 1763, those on Bering Island had been destroyed, and in 1768 the last one paid the penalty and the rhytina became a memory, the skeletons in the National and Russian museums, the San Francisco Academy of Science and a few others alone telling the story.

The great auk, the Labrador duck, and the do-do are examples of complete disappearance, while the



HERD OF ELK PASSING OVER THE PLAINS.

Mascarene tortoise, the Carolina parrot, the West Indian seal and others are among the passing throng.

## The Current Supplement.

The current Supplement is of very unusual interest. "The Conquest of the Sahara" is an elaborately illustrated article, showing actual sand waves. M. de Morgan's "Discoveries of Susa" is an attractive article, giving somewhat in detail a few of the important finds. There is also an article from M. de Morgan's pen entitled "A Trip from Teheran to Susa." "The Santa Ana Canal" is continued. "Improvements in the Three-Wire System" is by Alton D. Adams. ".Mr. Marconi's Lecture on Wireless Telegraphy" is the title of an interesting article. "Disinfection and Prevention in the Sickroom" is by Dr. Charles Harrington. "The Method of Testing Road Metals" describes the procedure in the laboratory of the Maryland Geological Survey. The article is accompanied by an illustration. "Acetylene and the Manufacture of Mineral Blacks" is by M. Georges F. Jaubert.

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