

THE COMMON HORNBILL.

The common hornbill (*Tmetoceros abyssinicus*) is a strong, short-winged bird with a short tail and comparatively long legs. The beak is very large, curved slightly, flattened on the sides, and is provided with a short but quite high protuberance at the root. This protuberance begins on the center line of the beak, projects forward to about one-third of the length of the beak, and may be open or closed in part, and has the general appearance of a helmet. The legs are much more powerful than those of other hornbills and have very strong claws. The sixth feather of the wing is the longest, and the point of the wing projects only a short distance beyond the upper arm feathers. The color of the bird is absolutely black, excepting ten yellowish white feathers of the wings. The eye is dark-brown, the iris lead blue and red, and the beak is black excepting a spot on the upper beak, which is yellow in front and red in the rear. The length of the bird is about four feet. It is found in Central and Southern Africa.

The White Ant's Parasites.

At a late meeting of the Philadelphia Academy of Natural Sciences, Dr. R. S. Kenderdine exhibited specimens of the wonderful parasites found recently by Dr. Leidy in the intestines of the white ant, where they occur in such myriads as to constitute a mass greater in bulk than the food of the insect. When the intestine is ruptured millions of these living occupants escape, reminding one of the pouring out of a multitude of persons from a crowded meeting-house. So numerous are these parasites, and so varied their form, movement, and activity, that their distinctive characters cannot be seen until they become more or less widely diffused and separated.

The termites or white ants are so common, easily obtained and preserved alive, and their parasites are so exceedingly numerous and constant in their occurrence, that once the fact becomes sufficiently known the insects will be favorite subjects to illustrate at once the infinity of life and the wonders that are revealed by the microscope. The forms observed, together with a species of microscopic plant found in the same situation, are fully described and beautifully illustrated by Dr. Leidy in the forthcoming number of the Journal of the Academy.

HUMAN TREES OF INDIA.

BY DANIEL C. BEARD.

All those who feel a sufficient interest in the subject to study or notice the facts must at times be struck with amazement at the wonderful resemblance of certain insects and other animals to vegetable and inanimate objects. So exact is this resemblance in some instances as to deceive the most experienced. Wallace, the great naturalist, was very anxious to secure a specimen of a certain brilliant butterfly, but was unable for some time to capture one on account of the creature's sudden unaccountable and mysterious disappearance. He finally discovered that the outside of this insect's wings was an exact representation of a leaf. When the butterfly alighted upon a shrub and closed its wings it completely deceived even this experienced scientist. Some species of lobsters found at Bermuda so closely resemble submarine stones, even to the coating of sea weeds, that I have passed by an aquarium containing them supposing the tank to be uninhabited. The common katydid, whose constantly-repeated notes, late in summer, warn us of the approaching frosts, has a representative in South America, whose wings not only resemble a green leaf, but, to add to the deception, the tips of the wings are ragged and discolored, having the exact appearance of a leaf that has been disfigured from the attacks of caterpillars. I once had one in my studio, and it was with great difficulty that I could convince visitors that it was not an artificial insect with wings made of real leaves. In the snow-covered regions of

the North the foxes, hares, bears, and birds, with very few exceptions, assume the prevailing white color of the surrounding objects. Man has not been blind to these hints. There are various tribes of savages who successfully imitate stumps and stones by remaining immovable in crouching positions so as to baffle their pursuers.

This mimicry is carried to a wonderful degree of perfection in India. That strange country, as Dr. Latham says,

taining hand. But the most ingenious device to escape capture is that shown by the Bheel robbers in the accompanying illustration. It often happens that a band of these robbers are pursued by mounted Englishmen, and unable to reach the jungle, find themselves about to be overtaken upon one of those open plains which have been cleared by fire, the only shelter in sight being the blackened trunks or leafless branches of small trees that perished in the flames.

For men so skilled in posturing this is shelter enough. Quickly divesting themselves of their scanty clothing, they scatter it with their plunder in small piles over the plain, covering them with their round shields so that they have the appearance of lumps of earth and attract no attention. This accomplished, they snatch up a few sticks, throw their body into a contorted position, and stand or crouch immovable until their unsuspecting enemies have galloped by.

When all is safe they quickly pick up their spoil and proceed upon their way.

The Rev. J. D. Woods gives an interesting account of these marvelous mimics. I quote the following:

"Before the English had become used to these maneuvers, a very ludicrous incident occurred. An officer, with a party of horse, was chasing a small body of Bheel robbers, and was fast overtaking them. Suddenly the robbers ran behind a rock or some such obstacle, which hid them for a moment, and when the soldiers came up the men had mysteriously disappeared. After an unavailing search, the officer ordered his men to dismount beside a clump of scorched and withered trees; and the day being very hot, he took off his helmet and hung it on a branch by which he was standing. The branch in question turned out to be the leg of a Bheel, who burst into a scream of laughter, and flung the astonished officer to the ground. The clump of scorched trees suddenly became metamorphosed into men, and the whole party dispersed in different directions before the Englishmen could recover from their surprise, carrying with them the officer's helmet by way of trophy."

Marine Fauna of the New England Coast.

To the current number of the *American Journal of Science and Arts*, Prof. A. E. Verrill contributes an article on the remarkable marine fauna discovered during the present season off the southern coast of New England by the naturalists connected with the U. S. Fish Commission. The stations at which dredgings were made are all located in the regions designated on the charts as "Block Island Soundings," and nearly all proved to be exceedingly rich in animal life, the vast abundance of individuals of many of the species taken being almost as surprising as the great number and variety of the species themselves. Crustacea, mollusks, annelids, and echinoderms were most numerous. The very large number of specimens obtained on the three trips has, as yet, been only partially examined, but enough has already been done to prove this region to be altogether the richest and most remarkable dredging ground ever discovered on our coast. Of mollusks, about 175 species were taken, 120 of which were not before known to occur on the southern coast of New England; about 65 are additions to the American fauna, and of these about 30 are apparently undescribed species. The star-fishes and ophiurians were exceedingly abundant and beautiful at all the stations, and many species not previously known

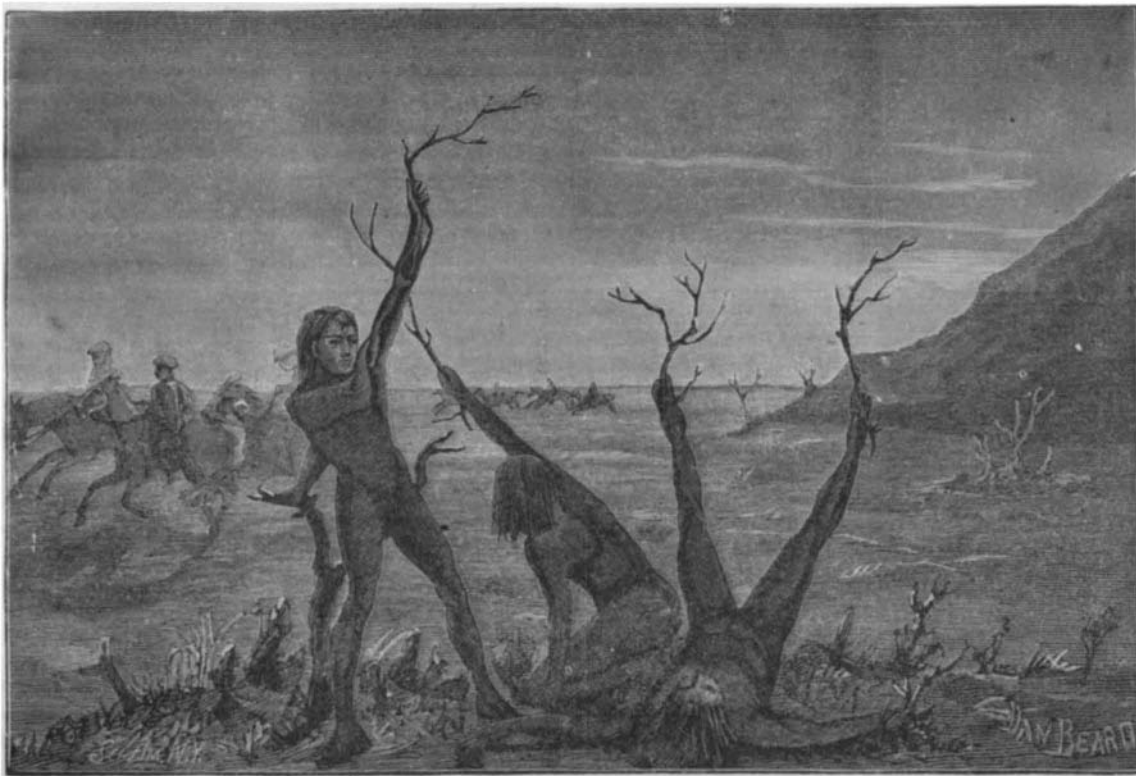
to our coast were taken, several of these appearing to be undescribed, while others were known only from Northern Europe or from the deep waters off Florida. Many of the species have only recently been obtained from the northern fishing banks off Nova Scotia. One new species of *Archaster* was particularly abundant, several thousands of specimens having been taken. But the two largest and most beautiful species of this genus were *Archaster Agassizii* (new),



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"of a teeming, ingenious, and industrious but rarely independent population. It is a country of an ancient literature and ancient architecture," and, he might have added, of a modern degradation. A country where such a society as the murderous thugs is possible; a country where robbers are educated from childhood for the profession in which they take great pride, openly boasting of their skill. One of our most skillful and adroit bank robbers would be considered by these India experts but a bungling amateur.

The scientific manner in which these robbers prepare for their raids shows a thorough knowledge of the dangers of



HUMAN TREES OF INDIA.—BHEEL ROBBERS IN HIDING.

their calling, and the best guards against the same, choosing darkness for their forays. When their dusky bodies are least observable they remove their clothes, anoint themselves with oil, and with a single weapon, a keen-edged knife suspended from their neck, creep and steal like shadows noiselessly through the darkness. If detected, their greasy and slippery bodies assist them in eluding capture, while their razor-bladed knife dexterously severs the wrist of any de-

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