

THE ANGELS DRIVING ADAM AND EVE FROM EDEN. The Artist A. T. Nowell's Remarkable Conception of the Bibical Story Which Professor Darwin-Beasley Considers a Premonition of Man's Final Fall and Not a History of His First. Supplied by Autotype Fine Art Co., Ltd.

By Prof. C. Darwin-Beasley

further specialize, as man did, through thousands of years largely in brain alone.

form it is a bird mechanism combined with a human brain.

the loftlest flight, some of them rising to six miles altitude. They also have great endurance in the rarefied regions of at mosphere. If any mountain tops re-mained, they could readily reach them. If any food existed anywhere, they could surely find it. Carnivorous birds are not subject to ptomaine poisoning, so far as we know.

An English Scientist That Intellectual and Carnivorous manity and That Our Ideas of Angels and the Expulsion

of the world only through a series of accidents and a prolonged conflict with nature. They are also agreed that he maintaines his position only by an unceasing fight against natural forces. Before man, other animals occupied the place of the dominant species, and there are sections of the world where even now another species than man is dominant inhabitant. There are, for instance, certain African stretches where the mosquito is ruler, and in the Antarctic the quaint

Mr. Shaw has predicted that humanity must give place, sooner or later, to a super-race and sink back to the level of a domestic animal-per-haps be wiped out. H. G. Wells, an equally famous scientific prophet, has taken the same point of view. He, unlike Mr. Bernard Shaw, has predicted the actual creation which he tinks will take place of man-

early caves and tree shelters still form the basis of his elaborate

Skeleton of a Bird's Wing Com pared with a Human Arm and Hand, and Skeletons of Man and Bird, Showing the Close Resem blance Between the Anatomy of

doubt seek further adornment. The bower bird of India ornaments his nest and collects beardful stones even now. There will be bird

the world, to be in its turn de-stroyed and another race of entirely different beings take its place.



of the University o

HROUGH millions of years, race after race of animals has succeeded each other, each race being of a higher type structurally than its immediate predecessor. It follows that man himself will have a successor in a still higher type of being. This may come about at any moment by some natural convulsion induced by an astronomic disturbance or other natural phenomenon, such as has undoubtedly many times caused great changes on the earth's sur-

In each prior disturbance, such as that induced by the increased weight of ice caps causing the earth to tilt over and assume a new position in respect to the sun, a few genera of animals have invariably escaped and survived to specialize in new functions to meet the new conditions of environment.

The next colossal convulsion is not far off, and it will most probably occur through the abnormal increase of ice forming in the Antarctic regions. When that happens, birds will be best fitted to escape. Enough of them in various parts of the world will undoubtedly survive to found the new and higher race.

Remember that birds and mammals alone have specialized in brains and have built up in their skulls ample brain the expense of other bones. case at With the brainier man and other brainy mammals all destroyed, the bird, having become the dominant being, will have to

bird brain to-day has already ample cerebrum. Its descendants in the new era will have first to specialize in convolutions of the brain, each new convolution increasing this intelligence. They will have to cultivate next for a long period brain cells, with which thought is produced and stored in the form which we call memory.

This development is not only possible; it is indeed the way in which nature has always worked her will in the world. That it would take ages to accomplish means nothing. The life of the whole human race from the time it emerged as ape man until to-day is only an instant in geological time. Forms perish, nature endures.

Humanity's vision of the angels, a higher form of life as winged beings, is, believe, his clairvoyant perception of his own doom and the race that will follow him. All his ideas of future life take the form of wings. The vision is simply the far-seeing of humanity that confuses with itself the actual creature that will follow it. Angels, winged things, will rule the future world, but they will not be transformed humanity. They will be intellectual birds!

In material things of to-day, the birdman is another expression of the same thing. It is either that or else it is an instinctive or unconscious effort of man to prepare himself for the struggle when will have to compete with this future bird-race. The flying machine has been gradually perfected by mastering essential details of bird flight. In its perfected

The coming super-race will necessarily approximate the same thing in a more compact form, in a single individual. Great powers of flight and long endurance in air, while the earth below is undergoing its tremendous convulsions, will be essential for survival. The birds which can fly the highest above the poisonous gases unloosed, and encircle the globe if necessary, in the search for surviving food, will have the best chance to ultimately escape and found this new race. Unless man can do the same thing with an aerial machine, he will perish just as the beasts and beings that walk or crawl.

But he cannot possibly by invention hope ever to accomplish survival, even isolated instances, during the persistance of a world convulsion, although many may escape results of minor disturbances. Fuel for his mechanism would be impossible to secure. His own structure is unfitted for indefinite endurance in air. The bird alone is hardened to aerial indefinite endurance and hence is the only earthly being available with which to found the super-race.

What birds would be best equipped to survive a world convulsion? It requires only a layman's knowledge to answer that. From the standpoint of science, we know that only carnivorous animals have dominant in each age of the world, and that each highest type that has arisen after each convulsion has been a We know that of existing carnivore. types the birds of prey, such as condors, vultures and eagles, also storks, adjutants and pelicans, have the powers of

The next class of birds that have the longest endurance in air, far greater than of the birds of prey, are the sea birds, especially the man-of-war bird, albatross, petrels, some gulls, etc. Of these, the albatross travels immense distances without moving the wings, by his wonderful power of soaring. If the convulsion were merely a water affair, such as the flood, they would not know it existed, so much are they at home on water, in air above the water, and even in the water itself up to certain depths when diving for food None of these birds, however, are so well equipped with cerebrum in brain case as certain land types, which also have great endurance in flight, such as the pigeon tribe. Their better brain alone, however, would save many of them, since even if they were hunted by the carnivorous birds, they could escape because of superior intelligence.

The super-bird of the next geological era, then, will be first a carnivore. He will be subject to no destroying pto-maines nor any of the diseases which cause mortality of man and other mammals. He will be at home at all altitudes. His flight will not be limited by mere globe girdling nor necessities of long endurance in air. As to-day, the birds of prey will have dominion on



Penguins of the Antarctic Continent, a Strangely Human Race of Birds Who Now Dominate That Part of the World (C. by Sir Douglas Mawson.) Copyright, 1915, by the Star Commany. Grant Britain Bights Reserved.

The Winged Beings Who Rule on Mars, as Imagined by H. G. Wells. A Conception of a Dominant Race Regarded by Scientists as Rational.

Birds Man's Rival in Intelligence--By Prof. W. H. H. Ballou, Sc. D.

THE theory that mankind will be superseded by a race of superbirds, which will control all the earth as man does now, is not entirely a new one to scientists.

Birds have continuously evolved, in one form or another, since the Jurassic It is also noted that they have survived the several natural convulsions and phenomena occurring since then, such as the evaporation of water in large areas of the world during the hot Miocene period, the various glacial epochs,

etc. Further confirmation, bearing on the point, is the admission by the distinguished Professor J. Arthur Thompson, of the University of Aberdeen. He says:

"There is a possibility of a vast increase of intelligence, of brain improve-mont, similar to that of man and the primates, as is instanced in rooks, cranes and parrots. There is also a chance for larger changes in constitution and habits!"

It is also to be noted that when a bird finds a new form of food he abandons the use of certain functions and utilizes new means to capture it. His descendants, continuing his efforts, specialize in new functions until there is a complete change and an entirely new form of bird is produced.

There are ample instances in support of this. The penguin affords one of the most drastic incidents of natural selection. It is a general proposition that a bird must have feathers. The ancestral penguins, therefore, must have had them. Being unable to escape the Antarctic when the ice cap commenced forming they specialized in several radical ways. Gradually their feathers became something between scales and hairs.

This new coating not being warm enough they accumulated fat sufficient to defy the Antarctic cold and storms and enjoy themselves. The penguin further specialized wing power for swimming only, until the wings became powerful paddles, moved by strong breast muscles, and leg power for walking. The latter is so powerful that when walking, as he does in a straight line, he forces movable objects out of his way, and not even a man can stop him.

Birds vary the use of their limbs to suit circumstances. The steamer duck of the Faikland Islands is a conspicuous instance. In youth these birds fly about like their kind in general. As soon as the adult stage is reached they abandon flying altogether, and use wings and feet

for swimming only. The hoactzin of British-Guiana is another striking instance. Soon after hatching the young birds begin to travel by means of legs and wings. They have well developed claws on the thumb and finger, by which they hook on to limbs or other objects. If taken by the legs they hang on to something with bill and wings. If their nest fails down they cling to the branches with bill, wings and feet. Later they take to true flight. The ostrich specialized in running, and on local American pacing tracks has about equalled the trotting horse by hauling a sulky and man at the near record speed of 2:10. He apparently has never attempted flight, whatever his an-cestors did. He utilizes his rather large wings and long feathers to assist in running. The migrations of birds undoubtedly

are indicative of their greatest intelligence. Books have been written about them, but I happen to have from the Russian Government data far more remarkable than that found in books. Siberia, the coldest storage reservoir extant the

year around, attracts the largest number of species for Summer nesting. Birds assemble there for nesting from many parts of the Old World, arriving and departing annually on very exact dates, as if moved by clockwork.

