

## NEW DISCOVERIES ALL OVER THE EARTH

### What Became Of the Race's MISSING LINK?

By WILLIAM LEE HOWARD, M.D.

By the missing link I mean literally that form of human being which must have existed at some time. First came the man-ape, and later the upright man and one who had learned to use his hands and live in family groups. This missing link was the man who spans the period between ape and savage man during the evolutionary era of life upon this earth.

We know something about the big apes and more about man, but nothing about what scientists agree must have been a link between these two extremes of living beings. To-day the gorilla's brain measures about 560 cubic centimetres; that of the lowest form of man about 1,150 centimetres. Where has gone the intermediate man whose brain measured midway of these figures?

He existed at one time; there can be no doubt about this fact, unless all scientists are at fault and evolution is a chimera. The probable fact is that at one time more momentous, tremendous changes took place upon this earth than we can comprehend. Life in trees and a diet of fruit gave way to one on the seashore and banks of rivers and to the eating of fish and flesh—perhaps human flesh.

All land animals originally came out of the ocean and swamps. Some of these mammals went back to the sea—real animals like the whale, the sea cow, the seal. These had existed on land and were migratory animals. What caused them to take to the deep waters of the ocean? This missing link was the middle link in our process of evolution; for at this period he was chasing and killing off the big animals for food, sport and as a measure of personal safety, just as the wild beasts are now being exterminated by man.

### How the Extinction of MAN'S ANCESTORS Brought About the COLOR LINE

During the period the brute-man existed he overcame the big animals. He probably multiplied rapidly for a time, learned the use of fire and to cook his food. He killed off the mammoth, the cave bear, the sabre-toothed tiger, the Irish elk, but left their skeletons for us to see and study. All trace of his own existence has disappeared, for those skulls and bones lately found do not belong to his period, but to a much later one.

Was the missing link a man of gigantic stature, as Professor Dawson believes? Was he capable of deeds of daring and feats of overcoming Nature's barriers, such as man individually to-day is not? Undoubtedly he was a powerful mid-man in the way of killing and exterminating. Anything that would not obey him or could not be tamed and made to work for him was put out of existence. All animals capable of being domesticated by the women were saved; and it is due to this fact that we have the horse, cow and the other domestic animals.

This missing link became a wanderer and one ever athirst for the blood of those whom he could not enslave. There is one prominent trait in our own nature we can trace from this mid-man—the hatred of races differing in mere color and the desire to war with even our own kind. For war breeds war; blood-hunger begets blood-hunger. Not until these traits are absent from man's make-up can we claim to have left behind the missing link.

We are still killing. Present man exterminated the North sea cow, the great auk, the buffalo. The Indians are disappearing, and many of the races of Polynesia have been completely exterminated. Man to-day is ruthlessly killing all bird and animal life through sheer love of slaughter and vanity. Why? It is an inheritance from our missing link ancestor.

Only by studying the history of man in his treatment of those differing in color from his tribe or family can we arrive at any insight as to the cause of the extermination of the missing link. Nor is this color or race hatred confined to man. It exists to-day among animals. The gray squirrel, for instance, will not allow the presence of red squirrels in the same grove or trees they inhabit. They will kill or drive away every red squirrel coming into their territory.

Man has always made ruthless war on every living

thing lower in scale—his fellow man or animals. Only those animals and men which could be enslaved were saved from extinction. Man in the dim past not only wiped out his own pedigree, but we have well-known incidences of this in modern times.

The Beothuk tribe, of Newfoundland, was so venomously hated by the white men that the thousands comprising the tribe were reduced in the year 1819 to one survivor—

Mary Nash. When she died, in 1824, the race ceased to exist. The native Newfoundlanders are one of the lost tribes. No living being exists to-day in whose blood flows one drop from an original native. The same is true at the other extremity of the globe. The Tasmanian has ceased to exist because this primitive race was considered by the white man unfit to live.

As man rose in his mental powers there probably was a distinct race of white-skinned people who determined to rule. They made war on all those whose skins were outside the white color line. In return, they were overcome by the horde of black and yellow men. The ex-

tingtion of the race we call the missing link was due, in all probability, to this passion for killing each other. It is also probable that the numbers of white people were greatly reduced until but few remnants were left. These fled to regions where geological changes swallowed up all traces of their existence. It seems rational to believe that something of the sort happened to that semi-human link all scientists have been hunting. In some of the fastnesses of the Tibetan plateaus a family or two found safety, and from these sprung again our white race. Buried under geological upheavals may be found the bones of our primitive ancestors.

But why our present and persistent hatred between the white and dark colored peoples? The explanation is to be found in our knowledge of psychology. It is in our subconscious memories. Memory stuff passed on through thousands and thousands of years. For the year of a race is as the day of man. It is a fixed, uncontrollable ancestral memory, and as much a part of ourselves as is the color of our skin—also an ancestral trait.

The bloody killings, tortures and horrible deeds of our old-time enemies, mutilating sex orgies, covering the lives of hundreds of generations, fastened in our brain memory cells which are brought into activity upon the sight of those whose skins are colored black, red, copper or bronze. This memory trait is as fixed as the one which causes us to shun and fear snakes. We are born with it; it is ineradicable, and may be for the best.

Just as the white man has the traits of straight hair, high instep, the negro woolly hair and flat feet as physical marks of inheritance, so do we possess in our brains memories of fear, disgust and hatred for those who exterminated our forebears—the missing link. To a certain extent depending upon the mental development, so do the dark-skinned people have ancestral memories of killings and torture.

This deep, subconscious hatred or dislike of white people for black people is the result of past ancestral sensation and experience. Its universality is shown by the law of affinities, in which, when the affinities come together, they both increase in strength and vitality. The white men in the Antipodes, the white men in Alaska, the Englishman in India, the German in Africa, all and each are of one feeling about the color line, due to the inheritance of the same ancestral memories.



A Remarkable Drawing of a "Missing Link" Mother and Her Child.

### Simple Ways of KEEPING WELL Even in the HOTTEST WEATHER

TWO men about the same age and surroundings, equal opportunities in life and both successful in their respective vocations, were walking together one hot Summer day. One fell from sunstroke and was taken to the hospital. Apparently the heat had no effect upon the other man.

This incident demonstrates what the public should know about the danger of excessive heat upon certain conditions of the body. It is not the sun's rays nor the great heat that directly causes sunstroke. The man who was stricken while walking with his friend had been heedless of all doctors' advice. His nervous system was below par through careless living. He wore a black hat and black clothes and would not adjust the weight or texture of his underwear to the weather. He dressed by the almanac not by the thermometer. He ate beef and drank heavy ale for his mid-day meal. He heated his blood by excessive eating; just as he did his skin by his stupid dressing. He died in the hospital—a victim of sunstroke. Nothing of the kind, he died from his own stupidity.

His companion ate and dressed to fit the weather and, of course, escaped the effects of the most sultry and hottest days.

In these few words are summed up the whole secret of escaping sunstroke in our climate. The condition of the inside and outside of the body determines the amount of resistance to atmospheric heat and humidity.

If one is inclined to fatness, Spring is the time to get rid of superfluous fat. This can be done by changing the Winter habits of living and eating. Alcoholic drinks should be let alone, green vegetables and light soups should replace red meats and spiced foods. Fish and stale bread take the place of ham, pork and hot rolls. The body should be covered by light, porous

clothing to allow of free perspiration, for evaporation through the skin is the way to keep down the body heat. Cold water—not iced water—should be freely used inside and outside, and the intestinal tract must be kept free and active. Mental excitement, anger, passions of all sorts, will soon put your nervous system and brain in a good condition to succumb to the effects of heat.

The majority of cases of sunstroke brought to the hospitals show an overloaded stomach or else a physical exhaustion from careless living as the real cause. Of course this excludes those cases of heat strokes due to working in fire rooms, refineries and other places where the temperature is always abnormally high.

No girl should go bareheaded in the streets of a city where the radiation from pavements and buildings sends up an enormous amount of unnatural heat. In the country and at the sea shore, where the breezes blow, it is not so dangerous. But under all conditions, when the sun is high the head should be protected by some light colored and light weight material. Blondes especially should keep out of the glaring sun if they do not want their skins mottled and their hair to become brittle.

When a person falls from sunstroke immediate action is necessary. Don't wait for the doctor or the ambulance. Five minutes' delay may make a difference between life and death; or worse still, a living but useless brain. Remember that the blood is overheated; every minute it is allowed to pass through the brain in this state injures the brain cells. Loosen all the clothing; strip the body if necessary and apply cold water to the whole surface. Not just to the head and temples. Modesty and life saving are not compatible attitudes. Put ice to the temples and the ankles.

If it is a child wrap its body in a sheet soaked in cold or lead water. Keep up this method of cooling the blood until the doctor arrives.

### Why BIRDS Are NOT KILLED by the THIRD RAIL

WHILE waiting at a railroad crossing after the gates were down, but before the train had whirled by, you may have been horrified to see a fat robin or a portly starling flutter to earth and calmly step upon the third rail. Of course, you expected to witness a piteous wiggling of the dainty body, a fluttering of the wings and then—death. Instead, wholly unconcerned, the bird hopped along the rail, meandered to earth and hopped back again, and all the while you watched him in fascinated amazement, wondering what magic saved the bird from electrocution.

The problem is very simple. It is not due to any biological difference between birds and other animals or human beings, but to the nature of electricity.

At every power house 12,000 to 30,000 volts are generated, the number varying according to the distance to be traversed. In short services, such as the ordinary suburban service, about 15,000 volts are generated, which

are reduced to 675 volts before being sent through the third rail to the substation, from whence the electric current is returned to power house, so that a continuous circuit is ensured. The brush of the motor car picks up the current, and in passing through motor the electric current drives it, then returns to the third rail.

Now the tendency of all electric currents is to return to the earth, and when any conductor, that is, any body through which electricity will pass, is placed on third rail at one end and allowed to rest on the earth with the other, the entire electric current contained in third rail will rush through this body into the earth. This is what electricians term a short circuit. Now when a human being or a dog places one foot on the third rail, remaining in contact with earth at the same time, as anything on legs is bound to do, a short circuit is formed, the 675 volts of electricity rush through the animal's, or through the human body, and, in

the case of a small animal such as a rabbit or a dog, it is bound to be fatal. A human being requires from 1,500 to 1,700 volts to be killed, but 675 volts will burn a man badly—perhaps so badly that he may die from the effects.

It is necessary to clearly understand the foregoing before we can understand why a bird is not killed by the third rail. A robin or a starling, to return to our example, will not reach down to the earth with one foot and upwards to the third rail with the other. He solidly plants both his little feet on the dangerous third rail, which immediately is rendered non-dangerous, because the bird rests entirely upon it and in no way has established a connection with the earth. The dangerous 675 volts pursue the dangerous tenor of their way, leaving the fat robin unmolested.

But, were a waddling goose to come along, and to lift one foot to the rail while the other remained on the earth, its fate would be the same as the rabbit's or the dog's.

### A New Way of MAKING THE DEAF HEAR

IT is not generally known, even among doctors, that there are many victims of deafness who cannot hear the loudest cornet playing, the shrillest counter tenor, the heaviest Wagnerian overture, or the noisiest of speeches and sound, yet whose ears are most sensitive to the noises that just fit their brain mechanism.

Comes now Professor Dr. Marage, an eminent otologist of Paris, France, with a simple but practical method of treating such deaf persons. After he describes in detail his explanation of defective hearing, and thus shows that the auditory canal has less to do with loss of the sense of audition than the paths in the brain, Dr. Marage explains his method which has brought relief to many

who are "hard of hearing."

His plan is to stimulate the ear with an ingenious but small siren. This tiny instrument is a replica of the sirens used on motor cars, tug boats and on small engines. It has the capacity of transmitting to the drumhead in the ear, sonorous waves of a measured intensity of air-pressure.

The special quality of each vowel note is produced by sending the waves of sound through little boxes or "resonators," which are moulded in the form of a mouth and throat as it expresses each vowel.

Therefore, if some one will use the siren methodically upon a deaf person, the ear will be stimulated by tones that as regards both quality and strength are natural to it, in-

stead of tones which are spoken, or sung, or produced by musical instruments or tuning forks.

In this way the ear and the brain channels of hearing can slowly but surely be re-educated by a kind of drilling which is the result of this new "siren method." Deafness, partial or complete, deaf-mutism, and all kinds and grades of auditory troubles have, in the late years, been successfully treated by Professor Marage and his students.

A regular series of vowel sounds and vowel forms produced by such a siren, can be made to fit each individual case. There is no doubt that this original and highly practical plan of treating deafness will result throughout the world in the relief of many of these unfortunates.

### How Ice Keeps out Cold

REFRIGERATOR cars are kept cool in Summer with ice. In Winter there is just as much danger that vegetables will be spoiled by freezing as there is danger in Summer that they will spoil with the heat, and for a while it was held to be more difficult to keep out the frost in Winter than the heat in Summer.

But now the same thing that keeps out the heat in Summer is used to keep out the frost in Winter, and that is ice. In Summer salt is frequently mixed with the ice to help lower the temperature, and cars filled with all sorts of fruits and vegetables can travel across the continent with the assurance that their contents will be fresh and wholesome at the end of the journey.

Now, for Winter travelling, especially for cars containing fruits and potatoes and such things that have to be sent through Canada or through the northern part of the United States, the cars contain the ice without the mixture of salt. There are large galvanized iron cylinders in these cars. It is in these that the mixture of salt and ice is used in Summer. In Winter the plain ice is used.

The reason why this keeps out frost is simple enough, when understood. Ice has a temperature of 32 degrees Fahrenheit and ice, being a poor conductor of either heat or cold, maintains this temperature and prevents the escape of heat that is furnished in the cars.

Still another device whereby ice is employed for protection against cold consists in throwing upon the car, when the weather is near the zero-point, a plentiful stream of water, which, freezing at once, forms a complete coat over the car. The action of the ice is said to be the same as in the other case.

A similar plan is sometimes adopted in the transportation of bananas, a fruit that is particularly susceptible to cold. The bananas are put in paper bags inside of heavy canvas sacks and covered with salt hay when the temperature is dangerously low.

### The STABLE FLY a Serious MENACE to HEALTH

A PLAGUE of stable flies in Texas last Summer gave rise to a special study of this insect by the Government Bureau of Entomology; and an outcome of the investigation is the discovery that the stable fly is responsible for vastly more mischief than was hitherto supposed.

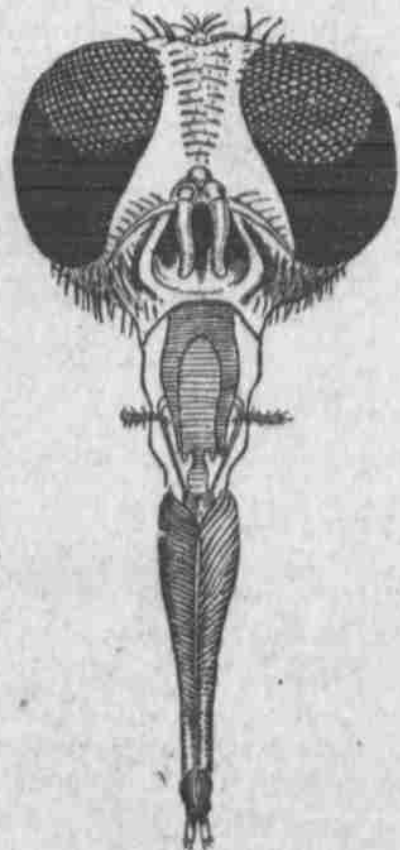
Not only does it cause great loss to owners of livestock, but it is the carrier of several diseases of cattle, horses and other domestic animals. In the Old World it transmits and distributes the dreaded "surra," which destroys immense numbers of camels, horses and cattle. As yet this particular malady has been kept out of the United States, but it may arrive at any time.

The stable fly is a carrier of both glanders and "swamp fever" among horses. It distributes anthrax among domestic animals, and probably to some extent among human beings. That it is the carrier of infantile paralysis has only recently been ascertained.

This fly is one of the most widely distributed of insects, being found in all inhabited parts of the world. The presumption is that it was introduced into the United States from Europe with livestock brought by the earliest colonists. It attacks all warm-blooded animals, causing severe injury to horses, mules and cattle, which often die. Sheep and goats, hogs (especially in pastures), and even chickens suffer.

During the outbreak of 1913, in northern Texas, many dairymen found their output of milk reduced from forty to sixty per cent. In some cases the cows dried up. All cattle, horses and other domestic animals were greatly reduced in flesh, losing ten to fifteen per cent of their weight. Dairy herds were not fit to exhibit. Farm ploughing had to be suspended because the horses and mules suffered so much.

Even the men engaged in the fields were frightfully bitten, the flies getting at them through their garments. Observation showed that after a while the cattle and horses gave up the fight, allowing the flies to swarm over them. The blood taken by a stable fly at one feeding is soon digested, and the insect is ready for another meal. The loss of blood is very serious. Al-



Head of the Stable Fly, Showing its Huge Compound Eyes and Bitting Beak

lowing several drops per fly for each meal, thousands of the pests will take a large amount of blood from an ox or a horse in the course of a day.

An interesting discovery made was that in the afflicted region, a great majority of the flies were bred in straw which, after the grain harvest had been scattered more or less over the fields and wet by rain. Even the straw in stacks, when it happened to be damp, was infested, 300 pupae being found in a single cubic foot of it. The moral of which is that straw should either be formed carefully into well-made stacks with vertical sides, rounded up on the top to shed rain, or else burned—unless (which is best of all) it be ploughed under the soil.

All of us are sufficiently well acquainted with stable flies. They look so much like the ordinary housefly that the average person would not notice any difference between the two. But the stable fly, unlike its domestic cousin, has a biting beak and knows how to use it. In the Summer time persons who wear low shoes are liable to suffer from attack by the stable fly. Stable flies breed, like the housefly, in manure. But damp straw in warm weather seems to suit their requirements admirably. The female lays nearly 300 eggs. In stables they cause an immense deal of suffering to horses everywhere. During the Texas plague it was found expedient to protect the horses by putting trousers on their legs, which were supplemented with burlap suits to cover the back, sides and neck.

It is the stable fly and not the housefly that causes such distress to horses everywhere in the Summer time. The poor animals endure agonies from the attacks of this insect.

With all the muckraking of the housefly, there has been up to the present time nothing said that is worth mentioning in regard to the dangerous character of the stable fly. Now that the latter has suddenly come to be recognized as a carrier of disease, among human beings as well as animals, stringent measures of one kind or another looking to its extermination, or at all events to the restriction of its breeding, will presumably be undertaken.

### Fish with No Mouths

IF you have ever visited a show-show, circus or museum, you cannot have failed to see armless "wonders" who write with their toes; elastic skin men who stretch their hide for six to twelve inches; tattooed women who have the whole Doomsday Book inked into their flesh; fat men, bewhiskered women, and even living skeletons. Even men who swallow reptiles, frogs, fish and whole aquaria are known.

But none of these marvels are in any way as strange as the species of fish of the carp family just brought to the knowledge of zoologists by Professor J. W. Fehlmann, Master of Arts and naturalist, of London, England.

Professor Fehlmann himself was astonished at finding these carp, experienced collector that he is. These strange fish can live and thrive without any mouth whatsoever. They are in this respect like a Pullman car without an entrance at either end. For four years these carp lived, digested and grew in a normal fashion. There was neither an entrance or an exit for food. The fish was exactly the same as a closed pipe as far as was evident from without.

When, however, Dr. Fehlmann dissected the carp described, the stomach and digestive canal was found to be literally swarming with the usual victims of the placoid tribe. There were numerous mayflies, larval grubs, plants, little crustaceans and similar aliment of fish in the food canal.

This explained how the mouthless creature flourished. Not only were they able to breathe through their gill-closets, but they were also able to both drink and eat by means of these respiratory openings. Although the carp lived in good health four years, there was not the slightest sign of adipose tissue to be found in the body. Professor Fehlmann is not convinced that there is a true species of mouthless fish, but he is determined to find out, if possible, whether these freak fish can be developed.