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DARWINISM.

Abstract of Dr. Smith's Lecture at the Medical University Last Night.

The first of the series of lectures by Dr. D. T. Smith, on Darwinism, was delivered before a large and attentive audience at the Louisville Medical University last evening. The lecturer began by stating that Darwinism was fast becoming accepted as an established principle in science, and unless speedily disproved it would soon obtain universal sway. The criminal fact upon which Darwinism is based exists chiefly under their several heads of Homology, Embryonic Development, Rudiments and Reversions, Geological Succession, and Geographical Distribution.

The immense significance of these facts was admitted, as well as the necessity which exists for their explanation upon some principle different from that which had in the past been offered. Some form of evolution must explain them, but the immediate question was, "Does Darwinism explain them?"

If no animal could be found possessed of rudimentary structures which it could not by any possibility have inherited from others in which they are normal and functional, if all the evidence in every case indicated for the animal only such a structure as it could possibly have had, then it would be difficult indeed to oppose Darwinism. But animals are found with vestiges of other animals from which all evolutionists, and all sound reasoning, agree they could and have been descended lineally, and this necessitates some other explanation than that of inheritance by genetic descent.

The means used by evolutionists to ascertain the line of descent, for an animal is the comparison of minute affinities between the various classes and orders, together with the aid of the periods of their appearance on the earth, or geological succession, and some old organs called rudiments. That is to say, if an animal is supposed to have for its progenitor and line next above it, next below it in the scale the best preceding it the time of existence on the earth. We find Mr. Darwin subscribing to this mode of the descent of Man (page 194, vol. 2). Applying the rule we find the family of apes to be next to man in the downward scale and therefore in the line of his progenitors.

Below the apes come the Lemuridæ, which, according to Huxley, who is quoted by Darwin "stand immediately on the crown and summit of the animal creation down to creatures from which there is but a step, as it seems, to the lowest, smallest, and least intelligent of the placental mammals." Next in the line come the Marsupials, to which class the kangaroo and opossum belong, and after them the Monotremes, leading down to the class of reptiles. Here Darwin gives the case given to Henkel, who takes us on through the various grades of fish to the arcidian or jelly-fish. It is not pretended that all of the species through which man has descended are still in existence, but taking, instead of those missing, their nearest representatives, we may say that the line of man's descent is proximately constituted by the ape, the monkey, the lemur, the opossum, the echidna, the crocodile, the fish, and the arcidian, and before that still some line of plants.

Now, if man has a descent at all, all parties must agree, and do agree, that it was along this line. A majority of the evidence points to this as the line. But some important facts of the case have been left out until the last. These conclusions would indicate a far different line as the progenitors of man. These facts are not only supplied, but used by some of the most competent observers to prove man's animal origin.

Thus Dr. Maudsley (London Lancet, Aug. 1870, page 403), after giving some cases of reversion to apes and other animals that might have been in the line of man's ancestry gives two cases from the case of an idiot who was something like a sheep, both in respect of her tastes, her mode of life, and the form of her head. She had no other language than the bleating of a sheep. To express anger or discontent she tried to butt with the crown of her head. She would sit only on the floor, and also slept in the pasture of animals. She would eat only vegetable food.

Dr. Maudsley gives also a case from Dr. Crichton Brown of a deformed idiotic girl who, in general appearance and habits, has points of resemblance to a goose; so much so that the nurses who received her described her as "just like a plucked goose." She covers her eyes with the side slowly as birds do, the eyes having the appearance of those of a goose.

The jaws are so conformed as to present a bill-like appearance. The neck is so long and flexible that she can throw it backwards and forwards between the shoulder-blades. The goose-skin is common over the body. She has no articulate sounds, but expresses pleasure by clacking like a goose and displeasure by hissing or screeching like a goose. She flaps her arms against her sides and beats her feet upon the ground when pleased to a very considerable degree, cackling with delight at times and screeching when she is taken out of it.

"Whence," asks Dr. Maudsley, "come these animal instincts inclosed in man?" Answering his own well-known case referred to by Dr. Carpenter, he asks "Was it really the reappearance of a primitive instinct of animal nature, a faint echo from a far distant past, testifying to kinship which man has almost forgotten? or proved to proceed to acknowledge? Such well-known animal traits are marks of extreme human degeneracy, but it is no explanation to call them such degenerations come by law, and are as natural as natural law can make them."

A little further on Maudsley proceeds:

"In most large asylums there is one or more than one example of a demented person who truly ruminates, bolting his food hastily, returning it afterwards to be chewed over at leisure, and quietly enjoying it up again into the mouth, and masticating it as the cow does. I should take up a long time if I were to enumerate the various brute-like characteristics that are at times witnessed among the insane. Enough to say that some very strong facts and arguments in support of Mr. Darwin's views might be drawn from the field of morbid psychology."

All will admit that the science of medicine numbers among its votaries no grander writer than Dr. Henry Maudsley. In his province Herbert Spencer styles him "facile princeps," and few will deny the justness of the title.

But his is not the only great name connected with the introduction of such facts. Darwin, carried consternation into the camp of its opponents. He, too, would have the bird in the line of man's ancestors. We find him saying (Antiquity of Man, page 616), "Hence the embryonic states exhibited one after the other by the human individual bear a certain amount of resemblance to those of the fish, reptile and bird before assuming those of the highest division of the vertebrata."

But how, by any theory of evolution ever proposed, could a bird give up its wings and become a quadruped?

We have gone along with Darwin and traced man back to the reptile. Professor Cope, in a pamphlet which pleased Mr. Darwin so much that he republished it at his own risk in England, traced down the line of the bird and endeavored to show that it, too, is descended from the reptile, and by a different line from that of man. Now, "Natural Selection" maintains that the bird is what we find it because it is better adapted to the conditions which surround it than any other animal which might have sprung from the variation producing the bird. The power of flight and feathers are the capacity of flight because they are an advantage, and all possessing them in a less degree have been cut off. No bird could lose its wings while the conditions remained the same which produced them. It would be of no support to say that the bird could travel against the wind, or a raft against the current. So, to get the bird in the line of man's supposed progenitors, we must believe that it was somehow caught and confined in a net, or otherwise caught and confined in a net, or otherwise way caught, and confined in a net, or otherwise disadvantage to it to fly, and that it there gave up its wings, became again a reptile and started on its new mission. Will some geologist show us that the crocodilus been this long upon the earth, and that too without changing?

But the sheep, how could it abandon its structure, tastes, and become a carnivorous animal? If the sheep has been produced by "Natural Selection" because it is better adapted for existence than any other animal which might have sprung from the variation producing the sheep, then it is to be, because it is better adapted for exposure to the cold winds of mountains, for leaping about precipices for subsisting upon coarser and rougher food, than any other animal which the variation producing the sheep might have become. Any theories of capacity or taste for eating flesh would injure the individual possessing it, and the change should be a sufficient one to let the sheep have a chance to live upon flesh. Any such would be destroyed by the action of natural selection. To cause a sheep to become a carnivorous animal all the vegetation must have been destroyed by a deluge, and the sheep, consequently, compelled to subsist upon flesh. Then the best-eaters would stand at an advantage. After all vegetable food was destroyed, of course the sheep that could not subsist upon flesh would, in the course of a short time, perish; and the flesh-eating would most likely eat would be that of their fellows. And this must have gone on through generations before the structure of the sheep would be changed to that of a carnivorous animal.

How can we go back to be a sheep again, or how the sheep as a ruminant passed such an ordeal and came down to our time is utterly inexplicable.

Then, if Dr. Maudsley is to be followed, the animal had to go through something like the same ordeal to become a cow, and then get back into the carnivorous line.

The idea is utterly absurd; but if Maudsley and Lyell thus go tripping, what may be thought of the thousands who follow them with a faith as unquestioning as man ever gave to his Maker?

But this does not end the list of incongruities. The flatter teeth may be as justly considered rudiments of the teeth of rodents as the canine teeth may of the carnivora. We would have man, then, first a man of prolonged jaws, then a quadruman, then insect, an acidian, a lamellose, a fish, a reptile, a bird that is a goose, then a reptile again, one of the crocodile family, as proved by the white lines across the abdominal muscles, which are rudimentary ribs. Next, the bird then a monotreme, a marsupial, a rodent, a sheep, a cow (unless we excuse Dr. Maudsley), a lemur, a monkey, an ape. Truly, a long line, as Mr. Darwin justly says, and more simply as a ridiculous and impossible one.

Further arguments are furnished by the uniformity of species. Darwin claims that at each successive stage species will be rendered nearly uniform by intercrossing. Now, if intercrossing is sufficient to produce uniformity after diversity has occurred, it should have prevented diversity in the first place; but we have diversity. Conversely if it could not prevent diversity, it could not produce uniformity; but we have uniformity among individuals of extensive species. According as intercrossing can or can not prevent diversity, we should have had but one species or millions.

The number of individuals that must have been destroyed on account of minute and unimportant variations is another unreasonable feature of natural selection. Thus every variety whose blood corpuscles varied (the ten-thousandth part of an inch from the type of its species must have been cut off, and so with the innumerable parts of the body.

Now the rods of Corti in the ear differ in length, and by this difference enable us to appreciate tones in music which would otherwise be mere sound. This arrangement in the cow or the horse may be as perfect as it is in man, yet at what time have they ever been put to the crucial test of music? What countless millions then must have perished, for no other reason than that they could not appreciate a music they had not the opportunity to hear nor the capacity to produce. What countless millions must have perished simply because they were unable to appreciate the difference between A flat and B minor, or a crochet and a semiquaver.

SEXUAL SELECTION

If natural selection is false, sexual selection is useless. It was found by Mr. Darwin that there were many features among animals that did not render them the "fittest" to survive. Thus a bird of conspicuous plumage, or one given to song, would be exposed to greater danger than one that was plain or silent.

Seeing, then, that natural selection could not produce features of beauty, or capacity for singing and other like features not of advantage to the possessor in the race of life, it occurred to Mr. Darwin that these were produced by the females choosing the males that were thus most favored. And to prove this he devotes nearly a volume and a half of his Descent of Man. The principle he calls sexual selection.

Against this it is objected, first, that, even Mr. Darwin being the witness, it is not proven that the females make any such selection.

Again, the production of a variety by sexual selection presupposes an impossible state of things. By what rule or standard of beauty do the females make their selection? Do the females have notions of beauty in advance of its development in the male, and if so, what has given it to them? Figure to sexual selection, could not become formative selection to produce it. It must be supposed that females were compelled to like these peculiarities, and at the same time to mate with males that did not possess them, and that if they did not like the peculiarities, they could not transmit their likings to posterity, and, if they did not mate, and that with the males they did not like; they could have an offspring to inherit their tastes. Or, to suppose that the females that were pleased with the existing condition of things must have perished. It we suppose that males occurred fortuitously so often that the females had their tastes conformed to such an order of things, we have infinity to one against the supposition. Again, if the tastes of the females were formed by features of beauty in the male, such males as developed those features of beauty would prove distasteful and be cut off by natural selection. The only possibility for such upon sexual selection would exist would be that a superior power directed and fixed the tastes of the females, and this supposition is fatal to Darwinism.

Among plants of certain kinds there is quite as much difference in secondary sexual characters as among animals, and among these sexual selection could have had no influence.

Some other explanation, then, besides any that has been given, must be sought for these facts, and of this scarcely better evidence need be offered than that sexual selection has failed to account for them in the hands of a man of the abilities and learning of Charles Darwin.

REPRODUCTION.

The Origin and Development of Species.

Dr. D. T. Smith delivered the third and lecture of his course at the Medical University last night, to a fair and very attentive audience.

The following is an abstract of the lecture, giving the substance of the ingenious theories the lecturer in regard to the origin and development of species:

Dr. Davies shows that reproduction, or the setting of many from one, is the one fact that cannot be accounted for, except upon the assumption that there is in organic beings a force, form, at work in the inorganic world, and to inquire how that force can be appropriated or to reach new organization.

We have found that the first being or species could not have contained within it the force which built up all its descendants, whether that force be actual or germinal, involved infinite division without diminution of parts. Then it may be asked how it is the seed of man? could that be of the first? have been the absolute source of the seed of all his descendants? This difficulty has perplexed thinkers and attempts to meet it in three ways. One is that of the so-called Aristotelists to conclude that there is no such thing as creation, all organisms given to the elements. Another is that God created now soul for each human being that comes into existence. This is made in the interests of revelation, but surely revelation does not require it, nor would the supposition profit even if it were true. For who has not felt the tenor of revelation with its doctrine that every moment God is creating, or fallen, may be lost, and every day to struggle against sorrow and temptation and sin?

The third way, for perhaps it may be stated is that one soul originates another, in some way as one lighted taper sets up a flame in another; and if this idea were put into a definite shape, it commends itself as the best one often ever offered. One taper is much like every other, as we know, not by dividing it with that other, but by setting up such a flame among the particles of the other as is supposed to be given. The second taper is in whatever of the first. If we suppose the soul is an element existing in nature of which there may be an infinite quantity, and that it has the office and capacity for their formation in origin in a reasonable mode becomes intelligible. The existence of traits of character of animals in man is evidence going to show that such element has been the principle of lower beings. This view also becomes valid for the unity of man, and had been plentily strengthened in it by nature.

The principles which seem to govern in the formation of organized existence are:

There is life-force different from the chemical force, superior to it, and equal, in fact, to least, to that can only be employed by all the individuals of any kind of animal or vegetable during the life of such species, and equal to all that are employed by all of all the living things at one time on the earth; no individual being capable of supplying any portion that has ever been employed by another of species that is dead.

That there exist certain atoms of animal nature endowed with this force, and unlike those of inorganic nature, animals are possessed as essential constituents.

That these atoms from the beginning are endowed with powers and tendencies which enables them with their forces to enter into development for certain parts of the organisms through corresponding parts of the seeds.

That a part of these are destined by nature into the formation of male and some formation of female beings, and that the parts are equal in number.

That in passing in essential parts through an individual of one grade of atoms with their forces so passing, such a modification as incapacitated for being used by any other individual of grade, but when passed them for use in the next higher grade. And that the forces passing one-used all the atoms forces appropriate to it, perished by the end of its existence.

That each species of being has been and existed with a number of atoms of each kind out of the atoms and forces developed below it's grade.

That the beings below man have cost so of creative force, since it has all been made up and supplemented in the creation of man.

It is claimed that this theory explains the facts in nature before us, as well or better any doctrine of the genuine origin of species except it may be geographical distribution.

It affords an explanation of geological science: of homologies; of rudiments and reversions of heredity; of the equal numbers of males and females. It was also shown how this affords the true greater resemblance borne by savages than by civilized men. It affords an explanation of the absence of intermediate forms for which natural selection cannot explanation. Their absence is accounted for by the supposition that the object was to produce species of these kinds in the world, and that they might harmonize in man. The same explanation also is offered for the absence of canine teeth in herbivorous animals generally.

The question might be raised as to why force could be educated. It is conceived to be owing to the doctrine of the purpose of life, it could be answered that he was designed to the education of force; for the education of forces, according to this view, knowing at first only to build up living forms, had in the course of ages learned to build up so complex a being as man.

If asked by a vitalist where these forces had remained between the time they use in the first species, which is that it could only be imagined, it might be answered that all the principle of nature must have been shut up in the first beings and remained before its use in man.

The lecturer proceeded at length to adduce evidence furnished by natural history in support of his views. He admitted that the theory was a bold one, even in this age of science, and was not free from the risk of error, but the attainments of truth ought to be considered as above all other considerations.

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