THE STORY OF THE EVOLUTION OF LIFE

(Continued from page 7)

opment of living languages from a dead tongue lost, philologists would detect the roots of contemporary speech in the language of the ancient Romans. A philologist who attributed modern forms of speech to an act of special creation would justly be regarded as a lunatic, even if, in addition to the absence of historical testimony as to their natural evolution, a few words and phrases found in modern languages were missing in the original but defunct tongue from which these were derived. Yet, astounding as it may appear to the philosophical mind, there still linger in secluded places a few old fashioned people who still refuse to admit the unquestionable evidences of the descent of modern plants and animals from earlier and more generalised ancestors, merely because some links of the fossil chain in special places have so far eluded discovery. But it is thought that there lurks no danger to the current religious creed in conceding the established truth concerning the natural growth of language; while, it is uneasily felt that to acknowledge the verity of the purely natural evolution of organic forms is to assist in the shattering of the old time faiths of mankind.

Generations prior to the enunciation of the doctrine of descent naturalists had been compelled to classify plants and animals into groups and subgroups owing to their resemblances. Fishes were seen to resemble one another so closely in anatomical structure that however much they differed in outward appearance they were undoubtedly fish, and for this reason they, like reptiles, birds, and mammals, were classified, and necessarily classified, because of their obvious similarity.

All mammals, including man, are built on a common plan. Even mammals like the whale that look so much like fish that before the dawn of science, they were universally regarded as such comply with this condition. In their bony structure not only mammals, but birds, reptiles, and fishes are fundamentally alike. All these animals however much they differ in detail, show in their common structure plain indications of their common origin. Heredity binds all creatures to the past, but out of the earlier, simpler, and more generalised forms, the more specialized have slowly arisen, and as they have multiplied they have grown more unlike their far-off ancestors. All the backboned animals from fishes to man display a common structural system, and the wide differences we witness in the ascending orders of life are to be attributed to the dissimilar surroundings to which each has been driven to adapt itself in the conflict of existence.

Evolution teaches that the characters we inherit from our parents admit of gradual modification wherever such modification is serviceable in the battle of life. Examples of this are legion but a few may be submitted. Whales and porpoises swim in the sea and present the appearance of fish, while as a matter of fact, they are the modified descendents of terrestrial quadrupeds. When they adopted an aquatic medium great changes both in the structure and function of their organs occurred. The limbs with which they walked have been modified into swimming organs, and are now outwardly invisible. Another land animal is the seal, which has also taken to the water, but in this creature the changes have not proceeded so far, and the hind limbs, although each bone may still be detected, have become smaller and are directed backwards. These limbs are now useless for walking purposes, but give a fish like outline to the posterior end of the body. In the whales, the transformation of the hind limbs has become much more complete. No sign of these limbs appears on the surface of the body, and internally the limb bones survive in a very abortive state, while the skull and body together have assumed a fish-like form. Obviously the changes set up in the whale since it returned to the sea are very marked. But it is significant that the transformations which have occurred are most pronounced in those organs which were necessarily modified in order to enable this aquatic creature to dwell most conveniently in its new home. The whale's arm or fore limb has been far less modified than its legs. The fore limb has been transformed into a fin, but the bones of the arm, wrists, and fingers still lie concealed under the integument of the fin, and are now quite useless for their original purpose of locomotion on land, and serve only as parts of the swimming organ. And an anatomical examination of the head discloses all the bones of an ordinary mammal's skull, and the whale head has simply become shapen in such a manner as to present the least resistance to movement through the water. In fine, all the changes which have arisen in the whale's body are precisely those that are essential to a successful career in the sea.

Another mammal affords similar evidence of adaptation to a changed mode of life. The arm of the bat has been modified into a wing through an immense lengthening of the fingers, which have become enclosed in a membrane. A further example is afforded by the birds whose fingers have shortened and consolidated, the modified shoulder and forearm providing the bony support of the flying organ. One of the most remarkable adaptations of this character is to be seen in the extinct Pterodactyl, a flying reptile whose wing was formed by an extraordinary elongation of a single finger with a membrane embracing this digit, as well as the remainder of the hand. Serpents are descended from four-footed ancestors, and with them the limbs have completely dwindled away. In these few instances of a single organ, out of scores that could be cited, we possess overwhelming testimony to the truth that organs are transformed to meet the requirements of new functions. In other cases where an animal bearing wings is found, as with the insects, the flying apparatus is modelled in quite a different manner, because the line of ancestral development has been different.

In both the animal and vegetable kingdoms, organisms abound which retain in an aborted or dwarfed condition the relics of organs which are entirely useless to them, while these same organs exist on a larger and efficient scale in plants and animals to which they are serviceable. The unborn whale possesses teeth which never cut the gums, and would be useless to the adult whale if they did. And the whale carries with it through life various organs which are utterly valueless to any but a land quadruped. Even the structure of this animal's ear is far better adapted for receiving sounds in air than through water. Although nearly all the snakes have long since lost their limbs, and no vestiges survive, the Python still retains slight relics of hind limbs, although these are functionless. External limbs to such creatures as snakes would prove a hindrance to animals gliding through the forest, and they have been lost, among other causes, probably through disuse. The wingless birds of New Zealand present a similar example. As these birds seldom had occasion to employ their wings owing to the absence of land enemies, they appear to have declined to the merest vestiges through lack of use. The logger-header duck of South America merely flaps over the water, but noteworthy is the fact that the young birds fly extremely well. This again indicates descent from ancestors of normal flight.

(To be continued)

PLATFORM

Socialist Party of Canada

We, the Socialist Party of Canada affirm our allegiance to, and support of the principles and programme of the revolutionary working class.

Labor, applied to natural resources, produces all wealth. The present economic stystem is based upon capitalist ownership of the means of production, consequently, all the products of labor belong to the capitalist class. The capitalist is, therefore, master; the worker a slave.

So long as the capitalist class remains in possession of the reins of government all the powers of the State will be used to protect and defend its property rights in th emeans of wealth production and its control of the product of labor.

The capitalist system gives to the capitalist an ever-swelling stream of profits, and to the worker, an ever increasing measure of misery and degradation.

The interest of the working class lies in setting itself free from capitalist exploitation by the abolition of the wage system, under which this exploitation, at the point of production, is cloaked. To accomplish this necessitates the transformation of capitalist property in the means of wealth production into socially controlled economic forces.

The irrepressible conflict of interest between the capitalist and the worker necessarily expresses itself as a struggle for political supremacy. This is the Class Struggle.

Therefore we call upon all workers to organize under the banner of the Socialist Party of Canada, with the object of conquering the political powers for the purpose of setting up and enforcing the economic programme of the working class, as follows:

1—The transformation, as rapidly as possible, of capitalist property in the means of wealth production (natural resources, factories, mills, railroads, etc.) into collective means of production.

2—The organization and management of industry by the working class.

3—The establishment, as speedily as possible, of production for use instead of production for profit.

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