

WORMS MILLION YEARS OLD

Washington Scientist Finds Them in British Columbia Rocks.

LIKE TADPOLES IN APPEARANCE

Very Few of the Actual Animals Have Been Discovered and the Latest Find is an Important One.

Dr. Charles D. Wolcott, secretary of the Smithsonian Institution at Washington, is the author of a recently published paper on the fossil worms of British Columbia, based upon specimens collected during investigations commenced in that part of Canada years ago. The paper is entitled "Middle Cambrian Annelids" which in plain English means the worms of both the earth and sea from one of the oldest periods of geologic time. Not all worms resemble the plain homely angle worm or "rain worm," but many of them living in the sea are covered with long and beautiful iridescent hairs, some with scales like fishes and still others live concealed in tubes from which protrude long frills of brilliantly colored tentacles.

While the average reader may imagine worms not especially useful except as aids to the gardener in loosening the soil, as bait for the disciples of Isaac Walton, or to enable the early bird to break his fast; in geology they have an important part and enable the scientific student to estimate time and to study the conditions of life in the past ages. In the paper, Dr. Wolcott makes his first report on the annelids of British Columbia. As a rule, these worms have been known only by their trails and borings in the mud and sand deposits in the various periods of geologic time. Very few of the actual animals have ever been preserved the most noted discoveries being those in Bavaria and Monte Bolca. In fact, Dr. Wolcott searched for several years for such fossils in the shales of British Columbia, but not one of these animals was found until the summer of 1910, when he came across them in the form of mudstone called by geologists Burgess shale. These worms and other fossils are preserved flat so that the animal is represented by only a thin film which is fortunately darker than the shale or rock, and being unusually shiny is thus distinguishable. Even the fine details of structure are shown and often the contents of these animals appears as a glittering silvery substance.

Despite the fact that these animals are all worms or leeches, the forms vary greatly; some are truly worm-like, with varying wings or segments, others have nearly the appearance of tadpoles with heads, tails and fins, some have a tubular construction and tentacles, while others with feathery spines or scales as exposed in the rocks. Present the petal-like appearance of a chrysanthemum. The different forms of the annelids as well as their external and internal characteristics are clearly shown by six plates made from photographs of the actual fossils taken by a system of reflected light. The description includes several new families and genera, together with eighteen new species, covering a most exhaustive list of specimens taken from points along the Canadian Pacific railroad, near Burgess Pass and Field, British Columbia. Nearly all the specimens come from the Burgess shale, 3,500 feet above Field, or about 7,000 above sea level.

Dr. Wolcott's researches relate to paleontology, which is the historical branch of geology and covers the collection and study of animals and plants found fossilized in rock. The object of this science is to unfold the past history of our world as it is thus revealed to us by the remains of ancient life imbedded in the layers of the earth's crust. Dr. Wolcott shows a new point of view is opened by the study of the annelids or fossil worms; the fact that from one locality eleven genera belonging to widely different families were found, indicates that the fundamental characteristics of all the classes were developed prior to the middle Cambrian period, which is the oldest in the paleozoic era, and is known to scientists as the age of invertebrates.

It is absurd to venture a statement of the age of these animals, but knowing that they belonged to the middle Cambrian period, we can estimate an age of many million years—a great age for any specimen—but nature has preserved them so well that biologists are now able to compare them with the life prevailing today.

In the annelid paper the scientific names, descriptions and life histories of these ancient worms are given, and those interested in such a technical treatise will find much desirable information in this pamphlet, which is publication No. 204 of the Smithsonian miscellaneous collections.

SEE THE MAN IN THE CAB

He Rules the Power that Moves the Train and His Responsibility is Great.

When you saw him last he was sitting quietly in his seat back of the big boiler watching the crowd hurry down the platform to business and friends—a strong unromantic figure in oily overalls. Probably you did not give him a second glance, but a few minutes since he had held your life and hundreds of other lives literally in his hand.

Engine driving makes automobile driving mere play. If you are able to buy, or borrow money enough to buy an automobile you may have the joy of facing death wherever you may choose and the policeman is not watching, but you are mercifully prevented from letting many others share your fate. The engineer has no such limitations. He is at the mercy of mankind, nature, and his time-card, but a trainload of people is the stake for which he plays. Of himself he cannot think. Face to face with the inevitableness of the next moment, disaster comes through another's carelessness, he must be the first to suffer. If he himself errs, there is no one to share the blame. He is the incarnation of responsibility that can neither be shared nor shifted.

You will find the man in the cab throughout the world. He stands face to face with responsibility, sometimes gaining honor or wealth, but always at the cost of being master of the lives of others. It is a lonesome job, this being the man in the cab. Lonesomeness is part of the cost of power. The higher you climb the less you can hope for companionship. The heavier and the more immediate the responsibility, the less can a man delegate his tasks or escape the tragedy of his own mistakes. The private soldier can always share in victories, but the commanding officer alone bears the weight of defeat. The average man seldom thinks of the load which power brings. The captain of industry, on whose foresight and energy, on even the incidence of whose life, the

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prosperity and livelihood of thousands of families depend; the political leader who must bear the brunt of defeat which others have caused; the employer who can share his success with many, but who must face bankruptcy alone—these are no mere children of good fortune. Like the man in the cab, they stand face to face with responsibility, hardened with the fate of many, but expecting help from none.

The next time you look up from your novel to complain that the train is late, remember the man in the cab. Trains do not run themselves. It is a human life that rules the steam that hurries you safely through space. And the next time you envy the man of power and position think of the loneliness of his responsibility, the friendliness of his success, and the risk he faces while you, and those like you, are at ease.

If leadership seems easy, just try being a leader.—The World Today

**Potato Hill Philosophy.**  
A woman who would much rather be a man can't hope to give much satisfaction either as a man or as a woman.

When visitors can't say a baby is handsome they say it has a fine head, and this compliment is paid whether the head is perfect or of the shape of a gourd.

Every man believes that he lives in the best neighborhood in the world, which would indicate that the people are pretty decent everywhere.

Ever occur to you that the pompous fools who talk so much about the sin of divorce should talk more about septicaemia poisoning? A lot of that goes on you that pay, as well as behaving yourself. And I believe the devil admires a man who has sense enough to hate folly.

—B. W. Howie's Monthly.

saw you coming out twenty times.

Every little while we hear that a new devil has appeared to pester men. But it is always the same old devil. And the devil is not so hard to handle as is generally believed. He has nothing to offer you that pays, as well as behaving yourself. And I believe the devil admires a man who has sense enough to hate folly.

—B. W. Howie's Monthly.