

where the writer is familiar with conditions, no dead woodpeckers have ever been noted along highways during several seasons of motoring; no doubt some collide with wires, etc., but the writer is not aware of any case where the automobile was at fault. Observations here would indicate that permanent residents of the woodpecker family shun highways, and that abundant food exists for them in the deep forest. The northern flicker and yellow-bellied sapsucker frequent orchards and the outskirts of town, but have not been observed in danger from traffic. The red-headed woodpecker is practically non-existent in this region, having been seen in northern New York only once by the writer, and that many years ago. Were it present in such numbers as in Iowa, it might run into the same danger.

Far from being in peril of extermination, woodpeckers in northern New England should be on the increase. The reasons for this belief are based on the following observations: (1) The great abundance of insect food available because of the devastation caused by the spruce budworm (*Cacoecia umiferana*, Clem.) in northern New England and eastern Canada during the last fifteen years and the accompanying bark beetle infestations; (2) there is every reason to believe that the natural enemies of woodpeckers are being preyed upon to an equal, if not greater, degree than woodpeckers themselves; (3) the great numbers of woodpeckers which are encountered in the forest.

During the winter and spring of 1925, spent in the forest in northwestern Maine, opportunity was presented to study the daily life of several species at close hand. The following species, present almost daily about the camp porch, are listed in the order of their relative abundance.²

Hairy woodpecker (*Dryobates villosus villosus*, Linn.).

Downy woodpecker (*Dryobates pubescens medianus*, Swains).

Pileated woodpecker (*Phloeotomus pileatus pileatus*, Linn.).

Arctic three-toed woodpecker (*Picoides arcticus*, Swains).

Three-toed woodpecker (*Picoides americanus americanus*, Brehm).

and, with the coming of spring,

Northern flicker (*Colaptes auratus luteus*, Bangs).

Yellow-bellied sapsucker (*Sphyrapicus varius varius*, Linn.).

Hairy woodpeckers were especially numerous. On a peninsula extending into Cupsuptic Lake a conservative estimate would place the number at two to three birds per acre, eagerly at work upon insect-infested spruce and balsam fir, as well as upon paper

birch attacked by the bronze birch borer (*Agrilus anxius*, Gory.). One was practically never out of earshot of the pileated woodpecker, chiselling for carpenter ants at the base of some balsam—although seen less frequently on account of his shyness. Individuals of all species were unusually plump and well-nourished. No stomach examinations were made, but fragments of bark which littered the ground suggested that *Pitykteines*, *Ips*, *Dendroctonus*, *Monochamus* and many other genera were included in their food.

Following the nesting season many of the young made their appearance at the feeding station; they were exceptionally fat creatures, not differing appreciably in size from their parents. While no counts were made of the number of young per brood, there is every reason to believe that the abundance of food led not only to an unusually large "crop" of young, but also reduced the mortality during the nesting stage.

In conclusion, it is the writer's impression that the automobile can not be said to be exterminating woodpeckers in the northeast. Woodpeckers are forest birds, and while some few of the 375-odd species of Picidae may become adapted to life in telegraph poles in settled regions, and enjoy the benefits and hazards of civilization, the greater number will retreat to the deep woods with the advent of man and cultivation. A much more potent enemy of the woodpecker than the automobile is the disappearance of high forests, and especially coniferous forests. And, finally, the encouragement of woodpeckers should be every one's concern, for they are some of our very best forest protectors.

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HUMAN TAILS—A STATEMENT AND A CORRECTION

THERE is a very extensive literature on human beings with tails, and there are a considerable number of absolutely authentic cases.

In the Johns Hopkins *Bulletin* Vol. XII, 1901, p. 96, Dr. Ross G. Harrison has published a case and has appended quite a full bibliography. In some cases the tail has been amputated and microscopical examinations have been made showing enough muscular tissue to enable them to be moved. In other cases the existence of rudimentary vertebrae with fully formed joints between them lined with a synovial membrane has been shown.

In *Nature*, 1921, Vol. 106, p. 845, Sir Arthur Keith, the eminent curator of the museum of the Royal College of Surgeons of England, has discussed the embryological evidence for such tails. He writes me that

² The nomenclature is based on Chapman, *loc. cit.*

"some years ago we got a very good specimen of a human tail for the museum."

Professor A. H. Schultz, of the Carnegie Institution of Washington (Jl. Washington Academy of Science, June 19, 1925), publishes from the *Scientific American* (1889, p. 296) a photograph of a human being with a tail nine inches long.

So much for a brief statement as to the actual existence of human beings with tails.

The correction I wish to make is as follows: In my book "I Believe in God and in Evolution," I have included in the fourth edition a photograph of an Igorot with a tail, which I vouched for as I understood that it had been photographed by my own grandson, Mr. John Freeman.

A few days ago within a few hours of each other, I received letters from Dr. Aleš Hrdlička, of the division of physical anthropology of the National Museum of the Smithsonian Institution, and Mrs. Ella F. Grove, who a year ago had been doing some work in the Philippines for the National Research Council. Both of these correspondents stated that the Bureau of Science in Manila had shown them the original of this photograph which showed that it was a fake photograph, the tail having been added to the original by a photographer, I suppose as a joke.

On communicating with my grandson I find that I misinterpreted his letter and that he did not photograph this Igorot.

My argument that human tails (of which I have shown there are very many undoubted instances) prove our animal ancestry is not in the least disproved by my having unfortunately used a photograph which further investigation has shown to be a fraud, for there are plenty of genuine tails.

My whole object is to state the truth, and when any statement I have made is proved to be wrong, I wish to be the very first person to disclose the error.

Dr. Hrdlička adds "As to the occurrence of tails of course I am with you in every particular."

W. W. KEEN

SCIENTIFIC BOOKS

THE EVOLUTION CONTROVERSY

Evolution not Irreligious. Some General Aspects of Evolution and its Relations to Religion. By WALTER C. KRAATZ, Ph.D., assistant professor of biology, University of Akron, Ohio. Published by the author, price 20 cents.

DR. WALTER C. KRAATZ, of Akron, Ohio, sets out to show that "evolution is not irreligious" by "paying respects above all to Nature, for she is the fundamental teacher."

"Nothing is outside the domain of natural law and

the Infinite at the basis of it. There is everywhere change. The Universe is not static in any of its parts." This statement is illustrated by features of cosmic evolution, geological evolution, biological evolution and historic development or evolution in human history, while the finely graded artifacts of stone-age man is but "a pushing back into pre-history and a demonstration of evolution."

Next our author takes up the various features of organic evolution, the present battle ground of attack by enemies of science. Organic evolution is defined by Dr. Kraatz as "gradual development from the simplest primordial matter on earth through modifications or changes to the many diverse sorts or organisms of to-day." The process of descent with modification is again compared with the growth of a tree, the analogies being numerous and striking. The various stages in life are briefly but accurately stated. He concludes that "we are not descended from a monkey or even an ape of any present-day type. Those apes and monkeys we know are living, altered forms. They are our contemporaries, and not in any way possibly in our ancestral lines. Apes and man had a common ancestry. Geologically that was not tremendously long ago . . . it was certainly not more than half a million years ago."

As to varied views of species forming, Dr. Kraatz is non-committal. He omits, however, all mention of isolation with segregation, a condition which acts everywhere along with selection, and without which, so far as we know, neither artificial selection nor natural selection could accomplish permanent results.

The present divergent views as to species forming are largely due to the failure of observers and experimenters to grasp each others' point of view, and to coordinate their results. Truth is always consistent with itself, but facts incompletely understood may seem to point in different directions.

In the third chapter Dr. Kraatz insists that there can be no conflict between the search for objective truth and the emotion or attitude of religion, which rests on no objective facts. The so-called "fundamentals of religion" have no natural or necessary relations to it. Historically they are additions or incrustations devised to promote religious feeling, or to be parasitic upon it. Of either of these we may find plenty of illustrations.

The Tennessee Evolution Case. By ROBERT S. KEEBLER, of the Memphis, Tennessee, Bar. Printed by "Friends of Fair Play," Memphis, Tennessee.

ROBERT S. KEEBLER, a leading attorney of Memphis, has taken up arms against the Tennessee law, its origin and its effects, in spirited fashion. He says of the statute itself: