

complained in 1870 of injuries done to books by *Lepisma*; and Mr. Lewis, after careful examination, stated, that, on account of parts of the bindings having been eaten, the books fell to pieces. He considered it impossible for *Lepisma* to bore holes in the books, which holes were probably made by *Anobium*. Mr. Morrill, head master of the Boston Latin school, has sent books at different times to Professor Hagen, which were injured by *Lepisma*, and specimens of the obnoxious insect as well. Professor Packard, in his guide, speaks of silk being eaten by *Lepisma*, which also devours paste, making holes in the leaves of books. Also Mr. Horne of London alluded to the damage done to silk garments in India by *Lepisma*. The insect doubtless attacks the silk for the stiffening-matter in it, but nevertheless destroys the fabric. Finally Mr. Adkin showed a species of *Lepisma* which damaged account-books kept in an iron safe in London.

After all these reliable facts, there is no doubt that *Lepisma* may become very destructive to maps, engravings, photographs, herbariums, and other things, if left undisturbed. The question, why has it not been observed long ago? may be answered by the fact that they run so swiftly that they are easily overlooked.

If we tabulate all the facts, we find directly that all damages, excepting to paper, have been inflicted on clothing, muslin curtains, etc., which were invariably starched, or finished with some stiffening size. I found a set of labels in the museum which had apparently been eaten by *Lepisma*, but which, on most careful tests being made, proved to contain no starch.

*Lepisma* is easily destroyed by insect-powder, which kills all that it reaches; and Professor Hagen recommends the same to be sprinkled about silk dresses, or the drawers and closets where such articles, or others likely to be attacked by *Lepisma*, are kept. He would cover the backs of valuable framed engravings with common, unsized paper, fastened with a paste mixed with insect-powder. All papers, where pressed closely together, are not reached by *Lepisma*, and in this way large numbers of accidents may be avoided; or, if they would be injured by pressure, they will be safe kept in simple pasteboard boxes, made to close perfectly, so that the little pest could not find an entrance.

ROBERT T. JACKSON.

[This obliteration of labels by insects, presumably by species of *Lepisma*, has long been a source of annoyance in the paleontological department of the Yale college museum. To remedy the evil, the labels have been, for some time past, prepared by soaking in a solution of corrosive sublimate or arseniate of potash.—ED.]

### Evolution and the faith.

It seems almost a pity that a magazine with the splendid reputation that the *Century* possesses for the encouragement it has given in past years to our contemporaneous expounders of modern thought, should admit to its columns such a contribution as the one that appears in the May number, from Mr. T. T. Munger, bearing the above title.

Mr. Munger closes the essay in question by indicating "in a categorical way the lines upon which further study should be pursued" with respect to evolution.

The several lines laid down in this category are divided into two sections, which are, 1°, "the respects in which evolution, as a necessary process in natural and brute worlds, does not wholly apply to man;" and, 2°, the "contrasting phenomena of evolution under necessity, and evolution under freedom." The first section indicates ten lines for further research into the laws involved; and the second, six. It would occupy far too much space here to reproduce all of these in the words of our author; and especially is this unnecessary, as it is my sole object to endeavor to show the general fallacy that pervades them all.

It must be evident to every one of us that Mr. Munger's chief error lies in the fact, that, in drawing up these 'further lines for research,' he has kept only before his eyes an idealized man and an idealized brute. May I ask our author where that hard and fast line is to be drawn, where 'instinct yields to conscious intelligence'?

A good many years ago I availed myself of the opportunity extended to me on a number of occasions, to examine that mass of living humans which constituted a cargo that filled the hold of a slave ship in the West Indies; and many a time since have I had the privilege of studying some of the lowest types of the now-existing Indians in this country. If Mr. Munger has ever had the opportunities of observing the habits of such creatures in their native haunts, I doubt very much that he would be wholly prepared to say, that, among *all species of men*, "the struggle for existence [now] yields to a moral law of preservation, and is so reversed."

Are our researches to now cease with respect to these low types of brute-like men, of which whole races still inhabit various quarters of the globe? Take the Mojaves of this country, and some of the tribes of central Africa, or Asia, or the native Australians, and any number of examples from them will stand witness to violate nearly every axiom Mr. Munger lays down in his category in the *Century*. In reality, some of them fully carry out the popular notion of a 'connecting link;' and from a study of their physical and moral organizations, science, no doubt, has derived some of her most trustworthy data for the establishment of evolutionary laws. They have by no means 'become conscious of the Infinite One,' nor do they 'systematize knowledge and reason upon it;' or at least, as Mr. Munger says for the brute, 'except in a rudimentary and forecasting way.'

Perhaps the remaining 'lines for research' of our author's category, upon which I have no comment to pass, may be more pertinent to a far later stage of man's development than would hold good at this day. The laws of evolution are still in active operation about us on every hand, and they have by no means been suspended in man's case, as Mr. Munger would have us believe. It can be said of the highest and best types of men, that, as a class, they are but on the threshold of psychical and intellectual evolution, while some of the lowest forms of the black men of Africa occupy a moral and mental plane but a few degrees above the one in which we find the corresponding attributes of some of those representatives of the animal kingdom that no doubt, in our author's zoölogy, would be classified among the brutes.

R. W. SHUFELDT.

Fort Wingate, N. Mex., May 18.