

ward, and in rolling react upon the waves, each a little; but the aggregate is enough.

GEO. F. WATERS.

The competition of convict-labor.

In my criticisms of Mr. Butler's articles on this competition, I have shown that his method of stating the figures in totals, regardless whether these totals are in that relation which is the question at issue, namely in competition, is irrelevant.

Now, in his last rejoinder (*Science*, vii. No. 158), he brings some figures which are relevant in showing this relation in two trades in New York, — hat and shoe making. In the former, for the year 1879, the ratio was 320 convicts to 5,267 free workers in the first trade, and 1,927 convicts to 26,261 in the second. The first ratio, he says, is 'about 4 per cent,' and the second 'something over 4 per cent.' In addition to questionable ethics and statistics already displayed, he now introduces very questionable arithmetic; for in reality the first ratio is 6.45 per cent, and the second 7.88. One who thus figures may well have, as he says, 'some hesitation in adducing fresh figures' ('fresh' in the sense of new, of course), 'for fear they may be summarily rejected as useless,' True, Mr. Butler, but not for the reason you give, — 'because they do not fit in some person's idea of how the 'course of nature' ought to go.' No 'person' has said or implied any thing about 'ought' in relation to the 'course of nature' or any other relation.

Those who are organizing the working-classes into a political party, to obtain what they deem justice, are in earnest. Only one who has not felt the dreadful sensation of being unable to sell his labor, when that is necessary to sustain life, can realize the bitterness and pain of such a situation. For every convict whose labor-product is sold in the market, a free laborer becomes superfluous, and therefore fewer work, or all are laid off temporarily, in that branch into which the convict is introduced. Here the 'political economist' of the prevailing order says, 'Find something else to do.' In most cases it is impossible.

There is another evil effect on free labor, resulting from prison-labor competition under any form; and that is, the effect it has to lower the rate of wages in any branch it enters. It must gain its market by underselling free-labor products; and however small the percentage, both as to its amount and of the decrease of its price, it lowers the standard of prices, including wages, in that entire branch.

To the workingman, a market for his labor is necessary to life: to the state, a profit from the prison is not essential.

Shylock, surely not an insane humanitarian, truly says, "He takes my life who from me takes the means whereby I live." E. LANGERFELD.

Is the dodo an extinct bird?

Have the recent excursions in theosophy, of my young friend Dr. Shufeldt (see *Mind in nature*, January and February), spoilt a very promising ornithologist to the extent of making him mistake a live Samoan tooth-billed pigeon (*Didunculus strigirostris*) for the astral body or the projection of the double of a perfunct dodo (*Didus ineptus*)?

ELLIOTT COUES.

Smithsonian inst., Feb. 14.

Corrections of thermometers for pressure.

The letter of Messrs. Venable and Gore in the last number of *Science*, on the effect of pressure on thermometers, contains a reference to the signal service, of such a character as to deserve a brief notice. It comes near leaving the impression that the service has just begun to consider a phenomenon which has been well known to most meteorologists, and to all engaged in accurate thermometric research, for more than fifty years. The letter, to which reply was sent from the office of the chief signal officer, made inquiry as to whether the service had ever published any thing on the subject, how thermometers used on Mt. Washington and Pike's Peak were compared with standards, and requesting information on the subject. The particular phase of the question which the service has 'had under consideration' was, whether the effect on the thermometers used in the service was sufficient to justify the application of a correction. To this end, some experiments had been made, the results of which were communicated to the writer of the letter. The correction necessary for Pike's Peak, which is the most elevated station from which the service receives reports, amounts to a few hundredths of a degree; and the propriety of its use is doubtful. The references quoted by the writers of the letter in *Science* were furnished them by the chief signal officer in his reply; the paper of Loewy and the memoir of Marck being quoted as among the latest and most complete. The phenomenon has by no means escaped the attention of writers. Among works likely to be easy of access, it will be found noticed in the 'American cyclopedia,' 'Johnson's cyclopedia,' Deschanel's 'Natural philosophy,' Balfour Stewart's 'Heat,' and doubtless many others of that class. It is noticed in numerous reports of the British association, especially in the reports of the committee on underground temperatures. One of the earliest investigations of the subject was by Egen (*Pogg. ann.* 1827). Sir William Thomson considered it, and provided against it, in 1850, in his verification of Prof. James Thomson's prediction of the lowering of the freezing-point by pressure. Professor Rowland considered it, and allowed for it, in his research on the mechanical equivalent of heat. In *Nature* (1873-74) it was much discussed; and of course it has been a matter of vital importance in all modern deep-sea temperature-work, in the reports of which it receives full discussion.

SIG.

Washington, D.C., Feb. 15.

Tadpoles in winter.

I have frequently observed tadpoles during winter, in ponds that were entirely frozen over, swimming about underneath the ice. Most of them were of large size: I remember none being less than three or four centimetres in length.

Although, in this latitude, most of the frog-spawn is deposited during the first warm weather of spring, and the hatchings of these spawns develop into frogs before the following winter, yet spawns occasionally occur in late summer or early fall; and the hatchings of these late deposits fail to mature within the same season, and consequently, in favored localities, live until the following spring, when they transform into frogs.

C. C. GREEN.

Middleport, O., Feb. 10.