

Scientific American.

MUNN & CO., Editors and Proprietors.

PUBLISHED WEEKLY AT NO. 37 PARK ROW, NEW YORK.

O. D. MUNN. A. E. BEACH.

TERMS.

One copy, one year \$3 00
One copy, six months 1 50
Ten copies, one year, each \$2 50. 25 00
Over ten copies, same rate, each. 2 50

VOLUME XXXI, No. 12. [NEW SERIES.] Twenty-ninth Year.

NEW YORK, SATURDAY, SEPTEMBER 19, 1874.

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PROFESSOR TYNDALL'S ADDRESS BEFORE THE BRITISH ASSOCIATION.

A most remarkable speech from a most remarkable man. Masterly in thought, profound in learning, keen in logic, it is startling in the boldness and vigor with which its author declares his faith in a materialistic doctrine...

To understand the position which Professor Tyndall has taken in this sudden invasion of the neutral territory lying between scientific and religious thought, the reader finds himself called upon to reconcile views which at first sight appear at wide variance. "Abandoning all disguise," says the speaker, "the confession that I feel bound to make before you is that I prolong the vision backward across the boundary of the experimental evidence, and discern, in that Master which we, in our ignorance, and notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium, the promise and potency of every form and quality of life."

This, standing alone, is unquestionably the most open materialism: but its force is modified when the assertion follows that "the whole process of evolution is the manifestation of a Power absolutely inscrutable to the intellect of man. As little in our day as in the days of Job can man by searching find this Power out. Considered fundamentally, it is by the operation of an insoluble mystery that life is evolved, species differentiated, and mind unfolded, from their prepotent elements in the immeasurable past. There is, you will observe, no very rank materialism here."

There is no negation of a creative power, while the affirmation of a sustaining cause repels the notion of atheism. The challenge is hurled at the theologians, the advocates of the science of divinity, and not the simply religious whose nature impels them to the belief in and leads them to love and reverence for their Creator.

Professor Tyndall demands for Science freedom of thought in every department of knowledge. He denies, in fact, the right of theology to compel us to accept in blind faith truths susceptible to the investigation of our own reasoning faculties.

In thus noting the views of a distinguished thinker, we chronicle an event of no common importance: albeit it is one of which the wisdom will be widely questioned, and the expedience (of directly bringing into popular controversy thoughts likely to disturb the faith of many) denied, even by believers. It must not be lost sight of that the large majority of people never think, but receive the faith of their ancestors unquestioningly; others are incapable of thinking for themselves, others too indolent and careless regarding the whole subject. These have regarded the agitations of the great theories of evolution and the like, which have deeply moved the scientific world, with indifference, and classed them with the older doctrines of Comte, Spinoza, and similar writers, which they abhor as atheistical and subversive of all religion and piety. On such people, the unmistakable utterances of Tyndall, dispersed broadcast by the public journals and not buried in technical publications, must have their effect; but whether the seed thus sown will fall on good ground and produce broader, wider ideas of the ineffable greatness of the Creator, or be choked by the tares of a belief undermined, resulting in skepticism and infidelity is a question which every individual must answer according to his own conscience.

A WOMAN WITHOUT BONES.

The social developments across the water show a lamentable state of affairs due apparently to no other cause than a deficiency of backbone in one or two individuals.

When such disastrous consequences proceed from the weakening of a part only of the human framework, we sincerely trust that there may be no spreading of the disease lately developed across the ocean in the person of an Irish woman, who lived to see her entire skeleton waste away until it was but a fourth part as heavy as a new born babe.

The case occurred in Dublin, and may truly be called extraordinary. The victim, forty-five years old, was a patient in an insane asylum. For five years she was confined to her bed, complaining of no pain, but gradually becoming weaker, while dwindling in stature until she lost half her height.

As the disease progressed, her limbs were coiled up in every possible shape, the bones becoming extremely light, soft, fragile, and atrophied in every respect. At death, all that was left of her skeleton, including the skull, weighed two pounds and a half. The number of fractures was prodigious. The ribs were in a hundred fragments. The head of the humerus was bent; the fibulae were curved; the thigh bones and pelvis were huddled together; the bones of the vertebrae were thinned and worn away across the front of their bodies; the lower jaw was atrophied and broken into three pieces; the base of the skull was cribiform all through. Had she lived a little longer, it was thought that not a vestige of a bone would have been left in her body. What ailed her no one could tell, the disease being almost unheard of and difficult to diagnose, treat, or even name. Professor R. W. Smith, of Dublin University, who brought the case before the Pathological Faculty, looked upon the condition of the bones not as a disease but as a manifestation of a diseased condition as yet unknown, possibly related to rickets.

LIVING BAROMETERS.

That is a curious instinct which a large number of animals possess, of predicting the weather and signifying the approaching change by peculiar movements or sounds. Some of their actions in this respect appear to be more governed by reason than by mere instinct, others are clearly due to the moisture in the air or various atmospheric influences, while some, which occur under conditions which prevent their being referred to the latter cause, offer an interesting field for the investigations of the naturalist. The presence of the barometer in almost every farmhouse, together with the weather bulletin or the dictum of "Old Probabilities," good for the next twenty-four hours, render such homely knowledge as that which governed the labors of the farmers and sailors of the last century almost superfluous in this advanced age; but the subject, like all topics which relate to the sagacity of the lower animals, is of itself an interesting one. And besides, it is not entirely impossible that some farmer to whom the barometer, if he had one, would be incomprehensible, and whose location prevents his obtaining the weather reports, may, by some odd action of his own cattle, of some insect, or of some bird, as described in the following lines, be forewarned of a coming storm in time, and save perhaps a crop during the present harvest months.

We have said that certain movements on the part of the animals, before a change of weather, appeared to indicate a reasoning faculty. Such seems to be the case with the common garden spider, which, on the approach of rainy or windy weather, will be found to shorten and strengthen the supporting guys of his web, lengthening the same when the storm is over. There is a popular superstition in England that it is unlucky for an angler to meet a single magpie; but two of the birds together are a good omen. The reason is that the birds foretell the coming of cold or stormy weather; and then, instead of their searching for food for their young in pairs, one will always remain on the nest. Sea gulls predict storms by assembling on the land, as they know that the rain will bring earthworms and larvæ to the surface. This, however, is merely a search for food, and is due to the same instinct which teaches the swallow to fly high in fine weather, and skim along the ground when foul is coming. They simply follow the flies and gnats which remain in the warm strata of the air. The different tribes of wading birds always migrate before rain, likewise to hunt for food. There is a large variety of actions of which it is hardly possible to give a satisfactory explanation. Coming rain is foretold by the peacock uttering frequent cries, by the

woodpecker lamenting, by parrots babbling, by pintados perching, and by geese running around uneasily. So also it is said that, when a storm is at hand, swine will carry hay and straw to hiding places, oxen will lick themselves the wrong way of the hair, sheep will bleat and skip about, hogs turned out in the woods will come home grunting and squealing, colts will rub their backs against the ground, crows will gather in crowds, crickets will sing more loudly, flies come into the house, frogs croak and change color to a dingier hue, dogs eat grass, and rooks soar like hawks.

It is probable that many of these actions are due to actual uneasiness, similar to that which all who are troubled with corns or rheumatism experience before a storm, and are caused both by the variation in barometric pressure and the changes in the electrical condition of the atmosphere.

PLUMBERS' CARELESSNESS.

The Prince Consort of England was killed by typhoid fever generated by foul sewer gases, due to carelessness and ignorance in the plumbing work of his residence. The Prince of Wales nearly lost his life through the same insidious means, due to the same inexcusable cause. One of the grandest and most venerable of English cathedrals that of Canterbury, was badly injured and nearly destroyed through sparks from a carelessly managed plumber's furnace igniting the roof. The magnificent Alexandra Palace, just completed and containing works of art of immense value, quite recently fell a victim to the flames, again originating among the plumber's working apparatus. Later still, the burning of the Liverpool landing stage, the greatest floating platform in the world, is now stated to have been due to the carelessness of the plumbers employed in joining the gas pipes below the flooring. The dangerous qualities of carelessness and ignorance, which are inherent to the workman of the trade, are therefore very justly coming in for their full share of reprobation from the English journals.

"Are we to spare a prince for every step of progress, or will our plumbers learn for the future without? They burn down cathedrals and music halls with unflinching impartiality by means of a system of soldering long ago abandoned by other nations. Thinking a good 'wiped joint' the perfection of human ambition, the plumber takes a long time over it and admires it lovingly from every side before he can make up his mind to part with it. This choice production of human skill is perhaps laid in the earth or built into a wall, and has no need of this fine art finish, but gets it, nevertheless." So says a correspondent of the English Builder. We echo his remarks with a grim sort of satisfaction, for it is not very long since we experienced one of the advantages of these lovely wiped joints, artistically molded by a bungler's paw. The completion of the work was the signal of a series of complaints (by the occupants of the building) that the water refused to run, except in a miserable little stream, from any of the faucets. Then we hired more plumbers to find out the mistakes of the first ones, and these overhauled pipes, and poked sticks and wires down them, and nosed around the cellar, and went on the roof, and ripped up the street. This was to the tune of something over a hundred dollars—still the water would not come; then the plumbers went at it again, and probably would have been struggling with wires and wrenches and spades and pincers up to the present time, had not some one suggested to look at the joints, and then the evil was found. One important wiped joint had had the solder squeezed into it so as to block up nearly the whole bore, and of course but very little water could pass through.

We hired another of the craft not long ago to look after a furnace, from every register of which horrible smells were emitted. We had a man and a helper; the duty of the latter was to hold a candle and converse with the man on appropriate and interesting topics, for which we paid him some dollars per day. This pair of worthies we turned loose in the house, with instructions to find out and eradicate the trouble. They got into the furnace, and poked brooms up into the flues, and took off the registers and poked brooms down. Then they pulled out several pieces of flue and soldered them over again, nobody ever could divine what for. Then they upset a furnace on a heap of kindling wood and nearly burnt the house down; and finally, after some days' tinkering, brought us an astonishing bill. We paid it, supposing that the work was thoroughly performed; but on lighting the furnace, again came the odor. On making a personal investigation, the first door that we opened (that in the brick casing of the furnace, which these individuals never thought to touch) revealed the cause in the shape of a bushel of dead rats. To make matters worse, the flues, which they had pulled out and fixed, had come to pieces, and we had to hire more plumbers to solder them with something besides rosin.

A few pages further on, in the same issue of the journal from which we clip the extract given in the beginning, is the report of the conflagration of some fine tenement houses in Edinburgh, due to a plumber's carelessness. The man left his furnace with a bright fire in it on the leads and went to dinner. A strong breeze blew it over, and the igniting of the building was the natural result.

We have no space to go over the series of outrageous botches which have been foisted upon us, coupled with enormous charges from plumbers, in this city. We have seen traps put in waterclosets, of not the slightest use in keeping down the noxious emanations. Water pipes run up the back walls instead of between the party walls, of course freezing at the first frost; new joints are made between floors, through which, the moment water was let on, the leakage poured out, to the ruin of our ceilings.

In fact so often have we been ruthlessly victimized that