

As the writer of this threat has no authority to dictate such an order, or the power to enforce it, it may be safe to assume that it was written under the instruction of those who have the power to give it effect. To such a menace there can be but one reply; much as we desire to see justice done to authors and their rights assured by international treaty, we would, without hesitation, decline concessions thus tendered, and hampered with conditions which would destroy the essence of the gift. We would rather counsel literary men "to possess their souls in great patience," and calmly await the day when their adversaries' souls may be possessed with moderation and justice, or public opinion be sufficiently strong to secure for them their just rights.

THE reported arrival at the port of New York of two male *woolly* elephants of dwarfish dimensions, has resulted in a request from a subscriber for authentic information regarding these strange animals.

It was alleged that the elephants in question were discovered upon the Himalaya mountains, and that the hairy covering found upon their bodies, and the great diminution of the natural size, were due to the cold of that region.

The inference to be drawn from such a description was, that the present specimens were in a measure a return to the extinct *Elephas primigenius*, the remains of one of which was found at the mouth of the river Lena in Siberia, with the flesh still in a good state of preservation, showing the skin covered with hair.

We find that the new arrivals were not found on the Himalaya mountains, but were purchased at the Parah River, Malay Peninsula, after the ship had left Calcutta. Their size is normal, for their age is not four and six years; but, probably, the smaller is about twelve months old and still feeds on milk, while the larger specimen is about two years old.

All young elephants are covered with hair, which afterwards falls off as they increase in age. These animals have this infantine crop of hair somewhat abundant, but not to an extent to create any especial wonder.

As Mr. Conklin, of the Central Park Menagerie, states, our knowledge of baby elephants is very limited in this country, and perhaps after all, the apparent excess of hair on the flanks of these animals may be normal. The young elephant, born at Philadelphia about nine months since, had a similar crop of hair, but not to the same extent.

Dr. Spitzka, of New York, who has seen these young elephants, confirms the opinion we have given, and states that they are not a new species or even a

variety; and he believes that the hair will eventually disappear, and even now finds, on the larger specimens, bald spaces.

We do not desire to spoil the speculation on these animals by stating the price at which they were sold on their arrival here, but the multiplication table has not been without its use to create an artificial value.

#### ACCURACY IN THERMOMETERS.

By recommendation from the Winchester Observatory, a bureau has been established at Yale College with the practical view of accurate verification of these instruments. Any person may send thermometers to this institution for the purpose of having them compared with the standard thermometer, and any variation from the accurate standard will be recorded. For the purpose of defraying the expense of these comparisons, the following scale of charges has been adopted for this verification: For standard meteorological thermometers, one dollar; for ordinary meteorological thermometers, fifty cents; for ordinary maximum thermometers, seventy-five cents; for ordinary minimum thermometers, seventy-five cents; for clinical thermometers, fifty cents. In case more than eight instruments of one kind are submitted at the same time, twenty per cent. will be deducted from these charges. Clinical thermometers, in numbers of two dozen or more, will be verified for four dollars a dozen. For thermometers of exceptional pattern, the charge will vary according to the character of each instrument. Communications relative to this subject may be addressed to Leonard Waldo, New Haven, Conn.

#### THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON.

The accumulation of material at Washington illustrative of the several branches of Anthropology, has drawn together a large number of specialists in Comparative Anatomy, Archaeology, Ethnology, Linguistics, and Sociology. For mutual improvement a number of these gentlemen have organized the above-named society, with Major J. W. Powell as President, Dr. Elmer R. Reynolds as Secretary, and Professor Otis T. Mason as Corresponding Secretary. The facilities which the Army Medical Museum and the Smithsonian Institution, with its Bureau of Ethnology, furnish for the preservation of valuable papers obviate the necessity for a voluminous journal of the Society. We have made arrangements, however, to present abstracts of communications and discussions on the week succeeding the meetings, which take place on the first and the third Tuesday of each month. The following is a *résumé* of the proceedings of Tuesday evening, October 20th:

The Anthropological Society met in the Smithsonian Institution, Major J. W. Powell in the Chair. After the reading of the minutes the following papers were communicated; "Notes on the Identity and History of the Shawano or Shawnee Indians," by C. C. Royce; "Civilization," by Mr. B. W. Hough. Mr. Royce stated that his paper was an introductory effort to a thorough study of the Shawnese, who were the Bedouins and Ishmaelites of our territory at the time of its first settlements. The early home of these people is shrouded in mystery. After carefully going over the Jesuit relations and other early histories, the author concluded with the bold proposition that the Massawomacks, the Eries

or cats, the Satanos of Colden and the Shawanons of later writers were one and the same people. These several tribes were then followed with the minutest care, so far as the early writers throw any light upon the subject. The latter part of the paper was a detailed account of the wars, treaties and fortunes of this people from 1755 to the present day. The discussion upon Mr. Royce's communication was participated in by Colonel Garrick Mallery and Major J. W. Powell.

Hr. Hough's paper related to the influence of the inheritance of knowledge and character as making progress in civilization possible. Each individual and each race is the outcome of all those material and psychical causes which have co-operated to bring them into existence. These facts were used by the author to show that the civilization of our race cannot be forced upon another race. By a multitude of examples Mr. Hough illustrated the methods by which the causes which give rise to races and phases of culture are brought together and co-operate to their end. The paper was discussed by Mr. Lester F. Ward, Major J. W. Powell, Professor O. T. Mason and Colonel Garrick Mallery.

### THE PRIORITY OF THE LATE FRIEDRICH MOHR IN REGARD TO THE PRINCIPLE OF THE CONSERVATION OF ENERGY.

By DR. GEO. W. RACHEL.

In an interesting essay entitled, "*On the History of Forces*," published by DR. C. K. AKIN in the *Philosophical Magazine*,<sup>1</sup> occurs the following passage:

"There has been of late a good deal of controversy regarding the priority of invention or discovery of this last named principle [Correlation of Forces] and it may be interesting, in a historical point of view, to take cognizance of passages of much earlier date than hitherto relied upon as establishing such priority, and upon which I have in the majority of cases rather accidentally lighted."

The controversy alluded to by DR. AKIN in the passage quoted, may be said to have continually attracted the attention of scientists since the above reference was made to it sixteen years ago. It is well known that TYNDALL's authoritative statement of DR. ROBERT JULIUS MAYER's priority has been accepted almost universally since it first appeared.

And yet there always was a number of scientific men who held another opinion; but in spite of their protests, even to-day the authority of TYNDALL prevails, and the popular notion all over the civilized world is that MAYER first discovered and proclaimed the great principle in question. This view, however, is erroneous, and in this paper the writer intends to prove, by the introduction of documentary evidence, that the late PROF. FR. MOHR, of Bonn, was the first who, in clear and unmistakable language, proclaimed the principle of the "correlation of forces" and the "mechanical theory of heat" on which it is based.

The history of the essay, on which his claim of priority in this matter rests, is a peculiar one, and since the circumstances attending its loss and its re-discovery have had a direct bearing on the controversy in question, they are worth mentioning.

It is certainly a unique occurrence, that a scientist should, for a period of thirty years, have been absolutely unaware of the fact that an article which for the first time in the history of science states a principle of the utmost importance, had actually been published in one of the scientific periodicals to which he sent his MS; and this was due only to the failure, on the part of the publisher or the editor, to transmit a copy of the number containing the paper to the author. But this is what really happened in the case of PROF. MOHR's article "*On the Nature of Heat*."

<sup>1</sup> Phil. Mag., 4th series., vol. XXVIII., No. 191, December, 1864; pp. 470-477.

MOHR first sent it to POGGENDORFF, but the latter declined its publication for the peculiar reason that "*it did not contain any new experimental researches*."<sup>2</sup> It was therefore returned

to MOHR and by him, in turn, sent to PROF. BAUMGARTNER, at Vienna, who, at that time (1837), in conjunction with DR. VON HOLGER, published and edited his *Zeitschrift für Physik und Verwandte Wissenschaften*. Not being informed by these gentlemen what had been done with the paper, he supposed it to have been shelved by them on grounds similar to those which prompted POGGENDORFF's refusal. It was only by an accidental reference to this essay in one of his later works<sup>3</sup> that he chanced to hear of it again.

DR. AKIN wrote to him that it had been published by BAUMGARTNER and VON HOLGER, in the fifth volume of their *Zeitschrift*, etc., p. 419, a passage of it having been quoted by him [DR. A.] in the essay referred to above.

The files of this magazine—which had a very limited circulation—having become scarce, since, shortly after its publication had ceased, the publishing firm was dissolved, it was very difficult to procure a complete set. Thus it was that MOHR had to wait many months until, in response to a request, he received a copy of the volume in question, sent for temporary use only by the librarian of the *Vienna Polytechnic School*, PROF. HLASIWETZ. A letter, accompanying it, contained the following passage:

" . . . I am happy to be able to congratulate you on this important essay, which puts your priority in regard to the question of the mechanical theory of heat beyond any doubt. I am glad furthermore that I should have been instrumental in the re-discovery of this hidden treasure<sup>4</sup>. . . ."

Very soon after DR. ADOLPH BARTH, of Leipzig, the present editor of *Poggendorff's Annalen*, succeeded in hunting up a full set of files of the *Zeitschrift*, etc., and presented them to PROF. MOHR.

Since then the paper in question has been twice republished in full. The first time by the author himself in one of his later works, with an explanatory statement, containing the history of its loss and re-discovery as given above,<sup>5</sup> and again by DR. HERMANN KLEIN in the seventh volume of his scientific monthly, the "*Gaia*" in the year 1871.

Although MOHR has never pressed his claim to priority, it is certainly due to his memory that all the facts in connection with it should become fully known. It is always to be regretted, when personal considerations—not to say animosities—come into play in such questions; but it seems as if this very matter had been destined to be the subject of an unceasing feud which has at times even taken the shape of a personal quarrel. Only a few years ago PROF. DÜHRING was 'dismissed' from *Berlin University* by a vote of the faculty, because he had accused PROF. HELM-

<sup>2</sup> For the same reason it was that the editor of the great *Annalen* declined five years later the publication of DR. MAYER's paper on the same subject, and it therefore appeared in LIEBIG's *Annalen der Chemie* (42, 240.)

<sup>3</sup> *Mechanische Theorie der chemischen Affinität*, Fr. Vieweg; Braunschweig, 1868.

<sup>4</sup> The letter bears date of Oct. 17, 1868, so that the author received and first saw the article fully thirty-one years after its publication.

<sup>5</sup> *Allgemeine Theorie der Bewegung und Kraft*, etc. Fr. Vieweg, Braunschweig, 1869, pp. 80-106.

NOTE.—It is to MOHR, and the fate of this essay, that DR. AKIN refers in a passage contained in his latest letter to PROF. STOKES, which was published in No. 15 of "SCIENCE." On page 179 of this Journal he says: "Another [MOHR] who started similar ideas about the same time, having been repulsed in one quarter (POGG. ANN.) took it for granted that the same had happened to him also in another (B. & V. H. *Ztschr. f. Phys.*, &c.) where it was not the case, so hopeless did he consider his endeavor to obtain a hearing."

It is a strange coincidence that the same humiliating experience was reserved for the last months of the great man's life. For, the last three essays which he wrote, each one of them, abounding in new and original ideas, were also declined by the editors of "LIEBIG'S *Annalen*." This unwarrantable procedure so disgusted the family of the venerable philosopher that they decided after his demise not to publish them in Germany at all. They have honored the writer by intrusting to him the publication of these valuable essays, and the readers of "SCIENCE" will soon have opportunity to judge, for themselves, of the new and striking views advanced by this great thinker.