

tion of the types of his own genera. It is my opinion that Linnæus's rules were followed to a larger extent by his disciples and immediate followers than we are wont to recognize. But the types of Linnæan genera in ornithology are not now a source of trouble. With the exception of two or three, of which *Vultur* is one, they have long been settled in a way to meet general approval. I do not apprehend that Dr. Stiles meant to suggest that any of these cases should be reopened if it is found that they were not settled in accordance with Linnæus's own rule. Indeed, his later remarks (quoted above) seem to preclude such a suggestion.

In stating the results of my determination of types by the two methods, as given above, it is impracticable to show the steps by which they were reached; I shall, however, publish soon elsewhere not only the basis of these results, but a complete list of all the North American genera and subgenera, with their types by both methods, where the results differ; and also showing each step in the process of elimination for all the genera to which elimination is applicable.

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#### CURRENT NOTES ON METEOROLOGY AND CLIMATOLOGY

##### CUMULUS CLOUDS OVER THE SAN FRANCISCO FIRE

MENTION was recently made in these notes of an observation recorded in *Nature* of cumulus clouds which formed over the fire succeeding the San Francisco earthquake of last year. Attention was at the time called to the fact that this was the first, and only, mention of such clouds which seems to have found its way into print. The publication of that comment in *SCIENCE* brought to the compiler of the notes a letter from Professor George D. Louderback, of the University of California, with reference to the clouds observed by him on the same occasion. As the matter is of some general interest, Professor Louderback's letter is here inserted, with the permission of the writer.

From your review of Mr. Van Norden's description of a cumulus cloud over San Francisco at

the time of the great fire, and your noting that it is the only reference to that phenomenon you had seen, I have concluded that you may be interested in a corroborative observation of mine on the same occasion. I was in Nevada at the time of the earthquake, and as my parents and other near relatives lived in San Francisco I took the first train for that city, but on arriving at the Oakland pier the morning of the nineteenth I found that no one was permitted to cross by the ferries in that direction. I spent several hours on the water front looking for a launch that would take me over, and then had a slow trip across the bay and arrived in San Francisco about five o'clock in the afternoon.

The form of the rising column of smoke impressed me very strongly, and I have made a number of efforts since to find some one who might have taken an expressive picture of it, but so far, without success. The dark smoke rising from a large area of the city rather quickly gathered itself together and rose to a great height as a tall column with a low conical base. At the top it spread out in a practically horizontal layer and drifted slowly to the northwest, in which direction its limit was beyond the range of vision. In fact, the first visible indication that I had of the fire was this drifting smoke cloud beyond the coast mountains seen from the train at Benecia (north of San Francisco), and looking west along the gap of Karquinez Straits.

This horizontal cloud extended a very short distance to the south of the main column—probably not greater than the thickness of the column. Rising above its upper surface and directly over the vertical shaft of smoke was the cumulus cloud, its upper surface forming four or five beautifully regular and pure white domes. Not only was it differentiated from the rest of the visible floating material by its form and position, but distinctly by its color and luster, and I decided that the cumulus cloud was of pure water particles, uncontaminated with the smoke particles that gave their character to the horizontal stratum. I watched it, at intervals, for several hours and noticed but little change. It reminded me very strongly of the photographs I have seen of volcanoes in eruption, and especially suggested the stone pine of Vesuvius. Even the form of the volcanic mountain was presented to the eye in the conical spreading base of the smoke column.

As we approached the city the lowering sun was veiled by the cylinder of smoke, and later by the lower layers, and produced the most striking and weird absorption effects. It became a deep fiery

red, sometimes mixed with various shades of brown and added, if possible, to the tension and horror of the scene.

On reaching the city, it was found to be pervaded with a sultry heat even several blocks from the fire. There was no breeze blowing—not a breath of air except the indraught and eddy currents produced by the conflagration. This is an unusual condition for San Francisco and lasted, I am told, through the first two days of the fire. I know that a light breeze from the west or south of west sprang up late in the night of the nineteenth and was just enough to throw the balance in favor of the fire-fighters who stopped the progress of the flames in the 'western addition' and the 'mission' districts. R. DEC. WARD

#### THE SHALER MEMORIAL FUND

At the last meeting of the corporation of Harvard University the treasurer presented the following communication specifying the terms governing the Shaler Memorial Fund, the receipt of a part of which was reported at the meeting of January 14, 1907:

More than 760 alumni of Harvard University unite in giving to the president and fellows of Harvard College the sum of thirty thousand five hundred dollars (\$30,500) to establish a Shaler Memorial Fund in commemoration of the long services of Professor Nathaniel Southgate Shaler and of the great affection in which he was held by his many students and friends.

The subscribers to this fund have left the designation of its use to the undersigned committee; and the committee, after consideration of various projects, concludes that the memorial object of the fund will be best attained—first, by setting aside a sum with which the corporation shall procure a memorial tablet to be put in the geological section of the university museum, or some other suitable place as may be designated by the corporation; and second, by using the income of the balance of the fund for the benefit of the division of geology, in support of original research and in the publication of the results of research, under the following conditions:

The researches here contemplated are to be undertaken by persons nominated by the committee of the division of geology and ap-

pointed by the corporation, whether officers or students of Harvard University or not. The subject and the locality or field of research are to be approved by the division committee, preference being given to studies of an advanced and original character. The sums of money allotted from the income for research are to be determined by the division committee, with the approval of the corporation. The money appropriated for such work from the income of the fund shall be in addition to the salary that would be otherwise paid to the person or persons undertaking it; and any work or journey thus supported in whole or in part shall be carried on under the name 'Shaler Memorial Research' or 'Shaler Memorial Expedition.'

The publications here contemplated are to include the results of original research carried on with the income of the fund, or independently of such aid; but the results must in all cases receive the approval of the division committee as to subject and presentation—though not necessarily as to the conclusions stated—before they are accepted for publication.

All publications thus approved, whether appearing in independent volumes or in some established journal, shall bear the general title, 'Shaler Memorial Series.' The allotment of money for publication shall be determined in the same way as for research.

Beneficiaries under the fund, either as to research or publication, may be invited by the division committee to give one or more public lectures in Cambridge on the results of their studies, under the general title 'Shaler Memorial Lectures,' but no additional payment is to be made for these lectures.

The income of the fund may be allowed to accumulate in case an investigation, expedition, or publication of considerable magnitude is contemplated by the division committee; but it is not desired that such accumulation shall continue beyond a reasonable period of time.

In addition to any future subscriptions that may be added to the fund, such part of the income as shall constitute one per cent. of the principal may be annually added to the prin-