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J. Denham Smith Esq.

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surface to another,—that even the most solid bodies may be conceived to emit vapours which after a long space of time may produce that which their surfaces rapidly produce when they are covered over with substances which easily evaporate,—we shall then not be compelled to have recourse to new forces, nor even to the rays of a *latent* and *invisible* light in order to explain the ingenious experiments of Moser. We are far from pretending to have given a complete explanation; we only proposed to show that they might be explained in entire conformity with the fundamental principle of the logic of experimental science: *Causas rerum naturalium non plures admitti debere, quam quæ et veræ sint et earum phænomenis explicandis sufficient.*

Pisa, March 1843.

C. M.

VIII. *Note on the Paper published in the Philosophical Magazine for September 1843, "On the Composition of an Acid Oxide of Iron (Ferric Acid)." By J. DENHAM SMITH, Esq. To Richard Phillips, Esq., F.R.S. L. and E., &c.*

MY DEAR SIR,

WILL you oblige me by inserting in the Philosophical Magazine the subjoined correction of errors in the paper referred to above? These errors arose partly from the almost invariable presence of manganese in the oxide of iron (*ferris sesquiox.* Pharm. Lond.) employed in my experiments,—an impurity neither suspected nor guarded against by me, and which usually occurs in such minute quantities as to render its detection impracticable by the ordinary tests,—and partly from the solubility of oxide of iron in potash, under certain conditions, a fact pointed out by M. Chodnew.

The first error occurs in p. 220, where a solution, which subsequently proved to be permanganate of potash, is described as a permanent solution of the ferrate of that alkali. The second and more serious error is that of the announcement of an oxide of iron possessing acid properties and forming a combination with potash, affording a green solution with water. After a careful examination I find this bright emerald green solution to be manganate of potash, and potash holding sesquioxide of iron in solution.

Having, in the paper referred to, satisfied myself that an oxide of iron did form a salt with potash, and also that the green salt contained this metal, I was too hastily led to infer that both these solutions were salts of acid oxides of iron, not suspecting the existence of manganese in the precipitated oxide of iron; this impurity probably arises from the iron turnings generally employed to saturate the excess of acid in the iron

liquor of the copperas beds, and thus contaminating the sulphate of iron from which the oxide of iron employed by me was obtained.

Yours truly obliged,

Romford, Dec. 18, 1843.

J. DENHAM SMITH.

IX. *Remarks on a Work by Prof. Bischoff of Heidelberg, entitled "Entwicklungsgeschichte des Kaninchen-Eies" (History of the Development of the Ovum of the Rabbit), 1842. By MARTIN BARRY, M.D., F.R.S.S. L. and E.*

THE following is the substance of notes written nine months since, when I was reading the work of Prof. Bischoff. Should the editors of the Philosophical Magazine consider them suitable for insertion in their Journal, I shall feel obliged by their allowing them to be published there.

19, X mo. (October) 1843.

MARTIN BARRY.

Bischoff, Plates I. to VIII. inclusive.—There is certainly some satisfaction in finding that observations recorded by myself two, three, and many of them four years since, in the Philosophical Transactions*, have led to a repetition of the same. But it is not very satisfactory to observe the mutilated form in which my figures are made to reappear. This last remark is intended to apply more particularly to figures representing the divisions which the essential portion of the ovum undergoes in the Fallopian tube.

Professor Bischoff seems to have adopted in part my mode of obtaining ova ("Second Series," *l. c.*, p. 365). Had he fully done so, he would not have found it needful to raise the ovum out of the oviduct with a needle; a sort of manipulation that it will not bear. And had he used the ring of putty I recommended, the ova might have been preserved for days, weeks, and even months; instead of requiring to be kept from drying up by the addition of foreign substances, which not only diverts the attention of the observer, but completely changes the appearance of the ova, and admits of their being examined but for a very short time. The ovum fig. 16, it appears, had lain in water! Nothing whatever should be added to ova from the oviduct; nor is it advisable to make any addition to those from the uterus that have not attained a considerable size.

Nature is not represented in the figures Bischoff has given of the so-called "yelk." This substance in the mammiferous ovum, as I long since showed, corresponds to little more than the "*discus vitellinus*" in the ovum of the Bird; and, like it,

* Researches in Embryology: First Series, Phil. Trans. 1838; Second Series, Phil. Trans. 1839; Third Series, Phil. Trans. 1840.