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## Original Communications.

### PHOTOGRAPHING THE RETINAL IMAGE IMPRESSED ON THE LIVING FUNDUS OCULI.

BY A. M. ROSEBRUGH, M.D., TORONTO.

(Read before the Canadian Institute, Toronto,  
April 4th, 1887.)

In January, 1864, I had the privilege of reading a paper before the Canadian Institute on "Photographing the Living Fundus Oculi" This paper was published in the journal of the Institute, which was issued two months later, namely in March, 1864. This article was copied by the scientific journals abroad and, among others, attracted the attention of Prof. Zantedeschi, of Padua, Italy, who wrote me in June following. This communication of Prof. Zantedeschi led to the production of the photographs which I have the honor of presenting to the Institute this evening; and as this communication is interesting in itself, and as I have a literal translation thereof, I will read the same. He writes as follows:

PADUA, June 28th, 1864.

DEAR SIR,—In the numbers 3 and 6 of the *Moniteur du Photographie* for the year 1864, I read with great pleasure that you have photographed the bottom of the eye of living animals, and I congratulate myself with you. I should have need, for the promotion of my studies, that you would be so kind as to make an experiment for me. Let the eye of a man be directed to an

object, as, for example, a flower, whilst the image of the flower *persists* on the bottom of the eye or on the *retina*; let the photography be executed; does the image remain impressed on the paper (*sempilizzata*) in the same way as it is seen in common photography? I expressed my philosophical opinion in a *feuilleton* entitled "La Camera Lucida." Applied to the prototypes of the external world the images are subjective, the impression is objective, and the soul or mind refers the image to the object from which the excitement or the luminous motion is derived. Be so kind as to write me and to enclose in your letter an *essay* of an eye photographed by you whilst the image of the flower *persists* on the *retina*. I give you my best thanks beforehand and remain, with high esteem, yours truly,

FRANCIS ZANTEDESCHI.

I was not able to carry out the suggestion contained in this communication until the following summer (1865), when, after several attempts, I was so far successful as to be able to demonstrate the possibility of accomplishing what Prof. Zantedeschi had in view, namely, photographing not only the living retina of the eye, but also, at the same time, the inverted image of an object to which the eye was directed. My experiments did not extend beyond this point, and I have not found it convenient to take up the subject since that time. The result fell so far short of what I believed might be attained that I refrained from reporting the little that had been accomplished.

As, however, the subject does not seem to have been taken up by others, although 23