of the article[2] on a "Census of Four Square Feet," the writer desires to state that he had hoped to anticipate such criticism by the statement in the opening paragraph that the results detailed are not held applicable to any classes of surface other than those examined. The scope of the article was further restricted by noting that all of the material was collected in winter months (November and March), on the surface of the ground and in the ground itself to the depth a bird can scratch. Moreover, the limits of the inquiry were again emphasized in next to the last paragraph, where it is referred to as an investigation of the surface fauna. In view of these facts, my statement that the population of the meadow is much more dense than that of the woods should not have been misinterpreted. By frequent reference to the special character of the investigation it was intended to leave no doubt that a survey was attempted of only the surface life. Hence all of Mr. Banks's comment on the fauna of above-ground growths, while interesting as showing what would be the nature of a census including these objects, has no bearing on the subject in hand.

Mr. Banks says of meadows and woodlands: "the two regions are so variable that a comparison from selected spots has little significance." The use of the term "selected" here is unfair, as it applies only in the sense that necessarily some spot must be chosen (indeed the plot of forest floor was designated by another person), but it is not more unfair than the efforts made to discredit the results of the "census," by instances every one of which in a very special sense is selected. Each instance, moreover, characterizes the summer, not the winter fauna, which alone was studied. For these reasons the writer fears that Mr. Banks has a mistaken conception of the paper he criticizes.

W. L. McAtee

PROFESSOR ANGELO HEILPRIN AS AN ARTIST

To the Editor of Science: The Pennsylvania Academy of the Fine Arts has at present on exhibition eight oil paintings by the late Professor Angelo Heilprin. Their subjects are: The Ash Cloud; Mont Pelé and the Ash Cloud; Looking into the Crater, June 1, 1902; The Tower of Mont Pelé; Mont Pelé in eruption with a graveyard in the foreground; A View into the Crater; An Eruption; Afterglow on the Ash Cloud.

Scientists undoubtedly know how much good work Heilprin accomplished in exploration, in natural history, in geography and in geology. But few of them realize as yet that Heilprin was a great landscape painter.

His painting is distinctly art, the art of a painter, not the art of a scientist. His pictures are not diagrams, they are not illustrations of any science—they are purely color records, memory sketches of phases of nature, which in the case of some of these Mont Pelé pictures, he saw at the risk of his life.

He seems to have had the technique of oil painting at his fingers' ends: his drawing is good: values understood; gradation of light and atmospheric perspective accurate: the quality and handling of the paint masterly.

These eight pictures, grouped together on one wall, have a jewel-like glow of color. They are all more or less in somber tones, except the Tower of Mont Pelé. Clouds, fire, darkness, smoke, have never been so painted before. And all of these pictures have the first and underlying art requisite—beauty.

It would be a boon to science and a boon to art, if these pictures could be kept together, and placed either in the American Museum of Natural History or the United States National Museum.

Edwin Swift Balch

Philadelphia,
November 23, 1907

BADGES AT MEETING OF THE AMERICAN ASSOCIATION

To the Editor of Science: The prospectus for the forthcoming meeting of the American Association for the Advancement of Science is now out. Will you allow me a few words in Science?

To me, and probably likewise to a large part of the attendance, meeting friends and seeing eminent men is very attractive. We gather very largely for this purpose—to see and be seen. At the meetings in Indianapolis

[2] Science, N. S., XXVI., pp. 447–449.

and Washington, the last ones I attended until recently, it was very easy to find out who were present from day to day, and generally possible to identify each member. The contrast in this respect was very great in New York last winter. It was very difficult, if not impossible, to learn who were in attendance, and equally to identify the members—quite a disappointment to me and I feel sure also to others. When I saw how things were at this meeting I asked a seemingly energetic member standing by me: "Wherefore this trouble? Why not post an alphabetical list in a conspicuous accessible place on the wall so we can tell, all of us, at a glance who are here." He seemed quite pleased with the idea and asked me why I did not patent it. I took this reply seriously until I learned that my companion was the learned permanent secretary of our association and then I saw he was poking fun at me, for how absurd to think there could be improvement on what such a man arranged! Perish the thought!

Our identification by buttons was very unsuccessful, apart from the absence of a list of names; the figures were far too small for most eyes. In fact the inability to make out the figure on a button placed me in the above absurd position of criticizing the management to our learned secretary himself. Moreover, the buttons were not quite fairly distributed. I came early and was assigned a low number, below fifty, I think, but I could not get that button throughout the whole meeting though I applied for it every day. I saw plenty of higher figures, way up into the hundreds. Members arriving much later were served much more promptly. Why not have the numbers on ribbons with large conspicuous figures, say scarlet ground and one inch black figures. These we could see. Then if in addition a daily list of members present were distributed, I for one should find happiness right at this part of the meeting, but I fear on account of the expense—what are our dues for—and because I see in the notices sent out that no daily program will be issued, I shall have to seek happiness elsewhere.

CLARENCE L. SPEYERS

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SPECIAL ARTICLES

ON THE DISCOVERY OF REPTILIAN REMAINS IN THE PENNSYLVANIAN NEAR PITTSBURG, PENNSYLVANIA

IN the vicinity of Pittsburg, the Ames Limestone rests upon a bed of almost structureless red and green clay which forms the upper part of the Pittsburg Red Shale. The thickness of this bed varies, but usually ranges from eighteen to about forty feet. At a locality about one mile west of Pitcairn and fifteen miles east of Pittsburg, the writer was fortunate enough to obtain a number of bones which appear to represent the remains of animals of at least two groups, namely: theromorph reptiles, and amphibians.

In this preliminary notice it is intended merely to describe these bones in a general way, and to show the stratigraphic position of the bed in which they were found. The bones have been examined and provisionally identified by Professor E. C. Case and Dr. W. D. Matthew, to whom my thanks are due. A detailed description of these fossils will be given by Professor Case in the forthcoming number of the Annals of the Carnegie Museum.

The "Crinoidal" (Ames) Limestone of western Pennsylvania is the youngest of the fossiliferous limestones of marine origin in that region, and is located at about the middle of the Conemaugh Series (Lower Barren Measures). In the vicinity of Pittsburg it lies 315 feet below the Pittsburg coal. At Pitcairn, the section extends but a short distance above the Pittsburg coal, but in the more complete sections farther south, the Monongahela Series, about 380 feet in thickness, overlies the Conemaugh. Above the Monongahela Series is the Dunkard Series, usually referred to the Permian. The horizon of the vertebrate fossils is at least 725 feet below the base of the Permian (Dunkard Series), and about an equal distance above the top of the Mississippian.

At Pitcairn the red clay beneath the Ames Limestone is 37 feet in thickness. Three feet above the base is a layer of somewhat nodular limestone, full of small worm-tubes (*Spirorbis carbonarius* Dawson). The teeth of the diadectid reptile described below were weathered