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JOHN RIDGWAY'S DRAWINGS FOR THE BENDIRE PLATES

WITH ONE ILLUSTRATION

By HARRY HARRIS

THE VALUABLE and important "Life Histories of North American Birds" now issuing from the United States National Museum under the able authorship of Mr. Arthur Cleveland Bent, of Taunton, Massachusetts, have quite naturally stimulated among other concerns an interest in the study of nesting habits, and have revived the eager desire latent in the breast of every old-time oologist again to take the field for one more haul of treasure. It is sincerely hoped that nothing will transpire to prevent the completion of this desirable series of publications.

Mr. Bent's volumes have focused attention once more on the work of his predecessor in this field. Since the appearance of the first Bent volume in 1919 the demand for Bendire's "Life Histories" has been such as to cause a considerable and steady increase in the price current of this pair of sumptuously illustrated quartos. Happily, these books, owing to a liberal Government patronage of zoological science during those times, are not excessively rare; but because of the generous format and superb plates they will always command a comparatively high price. The work of the author of course needs no commentary, as his eminence in the field of American ornithology has been adequately and ably subscribed to and is universally recognized. Much remains, however, to be said regarding the artist who contributed in such substantial measure to the permanent value and usefulness of the justly famous books.

In his review of the first Bendire volume on its publication in 1892 (*Auk*, ix, p. 375), Dr. J. A. Allen says: "The illustrations are on a liberal scale, and in execution are above criticism. It is perhaps safe to say that they are the best egg plates, taking the series as a whole, ever produced, at least in this country and probably anywhere." On the appearance of the second volume in 1896 (dated 1895) this same reviewer states (*Auk*, xiv, p. 104): "Also, as before, the plates are above criticism, and have as yet never been equalled in artistic effect or in faithfulness of execution." In his memorial of the life and work of Bendire (*Auk*, xv, 1898, p. 1), Dr. J. C. Merrill has to say in connection with the "Life Histories" that "A word as to the plates cannot be omitted. No superior work has ever been done, and no praise can be too great to apply to them. The present writer was in a position to know with what painstaking care and accuracy Major Bendire compared the successive proofs of the plates in the first volume with the individual eggs selected as types, and how often he returned the 'final' proofs to the lithographers for changes in some minute detail

that his critical eye detected." The fact that the Major's highly critical eye failed utterly to detect the least minute variance between the eggs selected as types and the artist's watercolor drawings of them only emphasizes the impossibility of lithographic printing doing more than merely approximating the perfection of original work. In view of these facts it is not at all easy to understand why the important and widely circulated articles quoted overlooked mention of the artist's name.

In a few of the lesser American ornithological magazines, notably *The Osprey* and *The Nidologist*, in reviews signed by Prof. Knowlton and Dr. Shufeldt, respectively, credit is generously given the artist by name. In other widely scattered articles of the time much was made of the superlative quality of the prints and of the unusual number of stones required to attain certain of the color effects, but nowhere has the artist in question ever been accorded the full measure of credit due him for his share in giving oology a classic.

The plates themselves are unsigned, and the student may easily overlook the paragraph at the end of the Introduction in Volume 1 where it is stated that "The original water-color drawings from which the plates have been reproduced were made by Mr. John L. Ridgway, of Washington, D. C., to whose skill and painstaking care the excellence of the illustrations is largely due. The chromolithographic reproductions of these plates were made by the Ketterlinus Printing Company, of Philadelphia, Pa., and it gives me pleasure to say that they are as faithful copies of the original drawings as it is possible to make."

The drawings were made in 1892 and 1893 when Mr. Ridgway was employed as a scientific draughtsman in the Geological Survey, in Washington, where since his arrival in 1881 he had been receiving inspiration and guidance from his older brother Robert, his sole instructor, in the mastery of his difficult and exacting technique. The Ridgway brothers during this period were marking an epoch in the development of avian delineation on this side of the Atlantic, and whoso shall come to do the interesting story of this development from the time of Mark Catesby down to the present school of accomplished artists shall have to weigh carefully the achievements and the influence on American bird portraiture of these two patient workers.

John Ridgway has been employed for many years, in addition to his regular work, by the Carnegie Institution, and for the past seven years he has maintained a studio in the Los Angeles Museum accessible to the Pleistocene fossil material which has occupied his attention exclusively for some time. It has been the privilege of the writer for the past year to enjoy daily contact with the artist, and advantage has been taken of the friendly intercourse to gather some facts that it is believed are worth recording. After much persuasion Mr. Ridgway has reluctantly consented to allow the use of his own words which will doubtless be appreciated by those readers of THE CONDOR who realize the remarkable merit and importance of the results achieved by him in the plates under discussion. He says:

"Like most scientific illustrators I have always been actuated in attaining results by something more than merely working to earn my income. Above all else there is always the great desire to produce something worthy of the author's text. I am sure that my failures have more than balanced any results that have been satisfying to me, and I have always been conscious when my best efforts have failed. In the Bendire drawings, a work for which I can claim only accuracy of delineation—their simplicity rendering any other claim trivial [!]—I had placed my standard high. I wanted to produce drawings as nearly like the original objects as lay within my power to execute. After some experimentation in position, illumination, and certain other subtleties necessary to bring out clearly the form of each egg, the result came as near satisfying me as anything I had done before or have done since.

"All the illustrations of this kind that I had seen appealed to me as being very poor. They lacked first of all the effect of rotundity. As to their accuracy I had no way of judging. Having been accustomed to drawing specimens and objects in great detail I saw no difficulty in that; but to produce the shadows necessary to make the eggs appear full and properly rounded without modifying the local or ground color appeared to me somewhat of a problem. I also encountered an additional difficulty in rendering dark markings directly over high lights.

"My first experimental drawing was to the end of developing a satisfactory system of shading. During this work it was found that an egg suspended in the air was less affected by reflections from surrounding objects than in any other position, and in order thus to place the egg for drawing, a wire holder was devised with a forward bent loop at one end and a sharpened point at the other. By the use of this simple device the light and shade, which was governed by a window on my left, proved to be perfect, and it was found that the shadow perspective toward the edges was particularly clear—a sufficient reflection from other parts of the room giving the slight halo near the outline that was desired.

"Having produced what seemed to be a satisfactory shaded drawing, the next experiment was in color perspective, by which any dark marking, for example, passing around the shaded side of the egg would grow slightly lighter as it neared the edge. The most difficult feature of the work, however, was in connection with the high lights. A dark patch or marking directly over that part of the specimen so illuminated would, unless handled just right, entirely obscure the light. With some practice it was found that by matching exactly the peculiar sheen displayed at that point on the specimen a satisfactory effect was produced, though it is not always well shown in the lithographs. (Mr. Ridgway has made the accompanying drawing [fig. 57] especially to illustrate here the above points.)

"The matter of producing a ground color unaffected by shadow was overcome by the use of an opaque wash of the exact color over the entire surface of the drawing (except the area of high light), which had been previously shaded with a tint composed of red, blue, and yellow applied in the proper proportions that always give the true shadow of any colored object.

"The original drawings from which the plates in Bendire's *magnum opus* were reproduced were made in 1892 and 1893. I was then regularly employed by the Geological Survey in Washington. Captain Bendire (then a retired Army Captain, later breveted Major) was, as is well known, Honorary Curator of Oology in the U. S. National Museum. My office hours in the Survey were from 9 until 4. This gave me opportunity to do some outside work on my own time, and having already become fairly well known among the scientific group in Washington, I was asked to undertake the egg drawings, the work being done on requisition furnished by the National Museum where I had at one time been regularly employed. I had at this time done some bird drawings and a great deal of miscellaneous illustrating in other branches of natural history.

"I well recall the first lot of specimens selected for me. The Captain had been so accustomed to dealing with subordinates that he had very little to say to me except that I should be very careful with the specimens and never leave them uncovered during the night or when they were not being used because of the danger of mice destroying them. This admonition, given me in a very kindly spirit, afterwards proved that he not only knew his eggs, but (as will be seen later) knew how to take care of them. For the protection of the specimens in carrying them back and forth, specimens selected with careful discrimination and in many instances representative types and extremely valuable, I obtained a small pine box in which were arranged card-board

partitions similar to those used in commercial egg crates. The box was of a size that would hold twelve or more of the smaller eggs, and when in use was strapped to the handle bars of my bicycle. Each Thursday or Friday morning or evening (except one!) during the course of the work I would ride over to the Museum where the Captain would always be ready to compare my drawings and refill my specimen box. I do not recall that there was ever a criticism of any of the drawings although each one was compared very carefully before the specimens were returned to the cases. One morning, however, I appeared on the scene ahead of my regular time. I had worked late the previous evening and had evidently forgotten to close tightly the lid

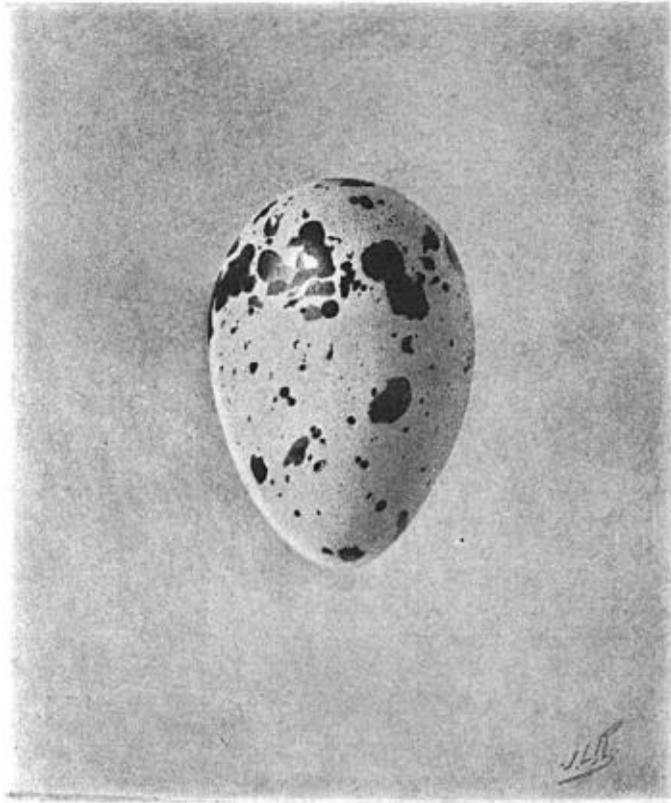


Fig. 57. EGG OF SOOTY TERN FROM WASH DRAWING BY JOHN L. RIDGWAY.

of the little box. Next morning when I started to resume my work I discovered to my amazement that there were bits of egg shells scattered around in the drawer, and upon opening the box I found that all the eggs had been badly cracked or broken to pieces. The mice had done their work and had done it well without my being aware of their presence in my rooms! My first thought was of probable execution at sunrise before a firing squad. This retired Army Captain and Indian fighter had the reputation of being a most strict disciplinarian, and I reasoned that this serious loss of his treasures was certain to bring down thunderous retribution on my head. However, this worried me considerably less than that he might charge the disaster to downright carelessness on my part. I resolved to return the box and fragments at once and explain the matter as best I could. When I entered his office he looked at me in the

greatest surprise, for he did not expect me on that day. I greeted him as usual and then proceeded, in I fear a not very reassuring manner, to tell my story. I particularly noticed that as I talked he walked back and forth, his hands behind him, and, as I thought, in great agitation. When I had finished, for there was very little to say, he came over, quietly picked up the box and without a word selected new specimens. He told me afterwards that he knew the moment I entered the room that something of the kind had happened, but he never alluded to it again during the progress of the work.

"Having so little time at my disposal, the work for each volume occupied several months before completion. The plates were finally made up or assembled by Captain Bendire himself, and were reproduced by the Ketterlinus Printing Co., of Philadelphia. I was informed that a lithographer was brought over from England especially to prepare the color stones, of which there were as many as eighteen needed to reproduce some of the plates."

It is believed to be universally recognized that oology has little of intrinsic value to offer science, though the accumulation of egg collections has ever been one of the more engrossing enthusiasms of ornithologists. It may be called quite appropriately the kindergarten of ornithology, since there have been few serious workers in the science who have not been led into their life's work through a boyhood mania for collecting eggs. The great number of collections in private hands, no less than the Government regulations necessary to limit these, testify to the wide appeal of oology. This appeal has resulted in an immense bibliography of the subject, comparatively little of which has originated in America, especially as regards worthy illustrative material. England and Germany especially have contributed to it voluminously, the same subjects being repeatedly pictured in books and periodical literature with a steadily improving quality and effectiveness.

Owing to the exquisite beauty of eggs and to the variations in color, form, markings, and size in individual species, oology lends itself particularly well to illustration. Of the many printing processes that have been employed in portraying these subjects, among which may be mentioned hand-colored prints from wood blocks, copper plates engraved and etched by several methods, and lithographs, as well as colored prints by chromolithography and by the modern process of multi-plate photo-engraving, chromolithography stands unique and supreme in its possibilities for rendering all desired effects. The ultimate perfection possible of attainment by this expensive and laborious process is exhibited in the Ridgway plates.

In conclusion it may be said that no matter from what standpoint these plates be critically examined, the reaction cannot fail to be the keenest appreciation for their immaculate beauty, brilliance, and exactitude, and wonder at the faultless technique of the hand that executed the original drawings. That they constitute the outstanding and preëminent achievement in the entire field of oological illustration will with difficulty be controverted.

Eagle Rock, California, May 30, 1927.