

It seems to me that a station on one of the Bahama Islands, if possible in a place where some sheltered or lagoon water could be had, would be the situation most to be desiderated.

E. W. MACBRIDE.

MCGILL UNIVERSITY.

SHORTER ARTICLES.

THE FIRST EDITION OF HOLBROOK'S NORTH AMERICAN HERPETOLOGY.

IN a 'biographical memoir of John Edwards Holbrook,' prepared for the National Academy of Sciences, and in the compilation of which I took unusual care, I assumed that only three volumes of the first edition of the 'North American Herpetology' had been published. In the 'publisher's note' to the second edition it was, indeed, explicitly stated that 'in consequence of * * * the demand for the *first three volumes* it became necessary either to reprint them or to make a new edition,' and thus by implication it was certified that no later volume of the first edition had been published. With this statement all the many bibliographies and works I had consulted agreed.

I was not a little surprised, therefore, when I received a letter from my friend, Mr. Witmer Stone, informing me that 'the last word' has not been said on the 'Herpetology,' and that there was a fourth volume of the first edition in the library of the Academy of Natural Sciences of Philadelphia. I was led thereby to review numerous bibliographies and works on reptiles and amphibians to ascertain whether any references had been made to a fourth volume which I had previously overlooked. Duméril and Bibron, Baird and Girard, Cope, Garman, Günther, Boulenger, and Stejneger alike made no reference to such a volume. The bibliographies of Agassiz and Strickland, Engelmann, Carus and Engelmann, and catalogues of numerous public libraries were also silent as to the existence of any other than 'the first three volumes.' The British Museum librarians, indeed, knew only one volume; in its great catalogue, 'Vol. I., Philadelphia, 1836. 4°' is listed, and the remark made 'No more published'!

In short, no recent author seems to have known a fourth volume of the first edition, but it occurred to me that Dekay, who was a friend of Holbrook and published his part on the reptiles in the same year (1842) as Holbrook did his second edition, might have done so. On reference to his work, I found he did.

Dekay, in his 'Zoology of New York,' Part III., listed Holbrook's work in his 'List of works referred to' by him (p. vi), as 'North American Herpetology; [etc.] 4 vols. 4to. Philadelphia, 1834 et seq.,' but inasmuch as he referred, in the synonymies of his work, to the second edition, although published in the same year (1842),* this was entirely insufficient. Occasionally, however, he did refer to a volume IV. ('vol. 4') which evidently was not that of the second edition.

Under 'the Snapping Turtle' (p. 8), reference was made to 'vol. 4, p. 21, pl. 3; and vol. 1, p. 139, pl. 23 of the 2d Ed.'

Under 'the Geographic Tortoise,' reference was made to '*Testudo id. [i. e., geographica]*' HOLBROOK, N. Am. Herp. Vol. 4, and Vol. 1, p. 99, pl. 14 of Ed. 2da.' This was quite erroneous; Holbrook described his '*Emys pseudogeographica*' in the fourth volume, but not '*Emys geographica*,' that species having been described in the first volume under the new specific name '*Emys megacephala*.' Under 'the Pseudographic Tortoise,' as well as all the other Chelonians, reference was only made to the second edition.

Under '*C[oluber] sayi*' (noticed as extralimital at p. 41) reference was made to 'Vol. 4,' which must have been of the first edition, since in the second edition the species was described in the third volume.

Under 'the Ribbon Snake' (p. 47) reference was made to 'Holbrook, N. A. Herpetology, Vol. 4, p. 21, pl. 4; and Vol. 4, p. 21, pl. 4, of 2d Ed.' Evidently the author had taken up the fourth volume of the second edition twice, for in that of the first, the '*Coluber saurita*' was described on page 87 and figured on plate 16.

The '*C. obsoletus*,' '*C. rhombomaculatus*'

* Dekay probably had proof-sheets and not complete volumes.

and '*C. doliatus*' were bracketed ({}) and listed as unpublished '(HOLBROOK, ined.)'. Really each of these species was published in 'Vol. III.' of the second edition and Dekay had referred to Holbrook's descriptions of the species which occur on adjoining pages, i. e., *Coluber constrictor* (III., 55, pl. 13, erroneously given by Dekay as 'p. 69, pl. 15') and *Coronella sayi*. The *C. rhombomaculatus* and *C. doliatus* of the first edition were referred to *Coronella* in the second edition.

Under *Salamandra rubra*, reference was made to 'Holbrook, N. Am. Herpetology, Vol. 4,' without specification of page or plate. In the second edition the species was treated of in the fifth volume.

For all the other species described in the fourth volume, reference was made by Dekay to the second edition only.

With these exceptions, I know of no references to the volume in question.

The subjoined description and summary of the contents of the volume are entirely due to Mr. Stone.

Vol. IV., Philadelphia, J. Dobson, 1840. [4to, title page + blank leaf + introduction [vii]-viii + contents (one leaf) + 9-126 pp., 28 pl.]

	PAGE.	PLATE.
<i>Trionyx ferox</i>	9	1
<i>muticus</i>	17	2
<i>Chelonura serpentina</i>	21	3
<i>Temminckii</i> (n.).....	29	4
<i>Chelonia mydas</i>	35	5
<i>caretta</i>	43	6
<i>imbricata</i>	49	7
<i>Emys cumberlandensis</i> (n.)...	55	8
<i>pseudographica</i> (n.)....	59	9
<i>Coluber getulus</i>	63	10
<i>Sayi</i>	67	11
<i>melanoleucus</i>	71	12
<i>constricta</i>	75	13
<i>eximius</i>	81	14
<i>vernalis</i>	85	15
<i>saurita</i>	87	16
<i>sirtalis</i>	91	17
<i>ordinatus</i>	95	18*
<i>sipedon</i>	99	19

* Misquoted in text VIII. for XVIII.

<i>rhombomaculatus</i> (n.)...	103	20
<i>leberis</i>	105	21
<i>Bufo quercicus</i> (n.).....	109	22
<i>Coluber amænus</i>	113	23
<i>Crotalus oreganus</i> (n.).....	115	29* [=24]
<i>Salamandra cirrigera</i>	119	30 [=25]
<i>quadramaculata</i> (n.)†...121	27	[=26]
<i>rubra</i>	123	27
<i>Haldemani</i> (n.).....	125	28

"Acknowledgements in the introduction are to Dr. Harden, of Georgia; S. S. Haldeman, Dr. Barratt, of South Carolina, for specimens, Mr. Heimans, Miss Martin and Chas Rogers for drawings, and to Dr. Logan for aid.

"The lithographing is by Duval, the drawings by Dr. T. M. Logan (4), A. Heiman (2), J. Queen (4), C. Rogers (3), Stocking (1), J. Sera (5), J. H. Richard (6), Miss Martin (1), Dr. J. L. Smith (1), A. Newsam (1).

"The volume is perfectly uniform with the others."

It will be noticed that Mr. Stone records no less than ten artists as contributors to the plates of the volume. It is quite possible that Holbrook may have become dissatisfied with the results, and for that reason suppressed the volume. His ideals were high, but, unfortunately, his constitutional inertness and forgetfulness interposed to prevent him from realizing his ideals; those ideals, too, were rather the perfection of the artistic than of the literary parts of his work. His later artist, Richard (pronounced Ree-shard), was an Alsatian Frenchman and his work required rigorous supervision. As a matter of gossip, he informed me that he had heard, in Charleston, that Holbrook had spent 'three fortunes' in the preparation and publication of his works. He would become dissatisfied with a work before its completion and would have new plates drawn and published. Then he would offer to substitute the new for the old

* The numbers on the last five plates are badly jumbled; the numbers in the text are all right, however.

† Name accompanying description is '*maculo-quadrata*.' The plate name comes first but *maculo-quadrata* is in the contents at the beginning of the book!

numbers, and, I was told, might even decline to let an old subscriber have a copy of the new edition unless the old one was returned—to be destroyed. If this statement was correct, the rarity of the old volumes would be to some extent at least accounted for.

The discovery of the new volume is interesting chiefly from a historical or bibliographical point of view. The only essential change it will entail is the dating back of the first descriptions of seven species, viz., *Crotalus oreganus* (so spelled), *Coluber couperi*, *Coluber quadrivittatus*, *Coluber rhombomaculata*, *Bufo quercicus*, *Salamandra quadrimaculata* and *Salamandra haldemani*.

In my biographical memoir I did not consider it necessary to correct or notice numerous misstatements respecting Holbrook's works, but perhaps it may be advisable to refer to one here.

In Engelmann's 'Bibliotheca Historico-naturalis' (p. 172) and in Carus and Engelmann's 'Bibliotheca Zoologica' (p. 134) to 'Holbrook, John Edw.' is accredited a publication entitled 'Scientific Tracts. 3 Vols. in-12. Boston 1831-33 (London, Wiley and Putnam.) 18s.*'

John Edwards Holbrook had nothing to do with that serial, the series having been commenced by one Josiah Holbrook in company with other writers. I have been able to see the volumes, which are in the library of congress. The three volumes are composed each of 24 tracts of a monographic nature, the 'terms' being '24 numbers a year, at one dollar and fifty cents, payable in advance.' Volume 1 has such contents as 'The Atmosphere' (numbers 1 and 3), 'Geology' (2), 'Gravitation' (4), 'Animal Mechanism' (5) and the like; one of the coauthors was J. V. C. Smith.

This series was succeeded by a 'new series,' 'conducted by Jerome V. C. Smith, M.D.,' issued in numbers of 32 pages each on the 1st and 15th of each month, miscellaneous in their character, and paged to form two volumes each year. Smith gave up and in 1836 a new

volume (apparently the last) of the 'Scientific Tracts' was published by others in 12 semi-monthly numbers of 32 or 24 pages, and, at last, of 16 pages each. Those were the years of tracts, religious, temperance, political, and even 'scientific.'

My thanks for information respecting the volume in question are due and given to Mr. William J. Fox, as well as to Mr. Witmer Stone.

THEO. GILL.

COSMOS CLUB,
April 28.

RECENT ZOOPALEONTOLOGY.

CONCERNING THE ANCESTRY OF THE DOGS.

MR. J. B. HATCHER, in a recent memoir on Oligocene Canidæ, distinguishes three closely allied genera from the White River formation and proposes some very interesting changes in the phylogeny of the family. His observations are based on the very fine specimens of these rare fossils collected by Mr. O. A. Peterson for the Carnegie Museum. These include one complete and three incomplete skeletons, the skulls all well preserved. The thorough and clear description of the skeleton of *Daphænus felinus* is especially valuable as based on a single and very complete specimen. The resemblance of this primitive dog to the contemporary ancestors of sabre-tooth cats has been strongly urged by Professor Scott in his previous description of *Daphænus*; Mr. Hatcher, on the contrary, is impressed less by its feline than by its creodont characters, which he points out at some length.

He distinguishes three closely allied genera among these specimens:

1. *Daphænus*, with elongate skull, high sagittal crests, robust premolars, etc.
2. *Protemnocyon*, gen. nov., with short skull, low sagittal crest and small premolars.
3. *Proamphicyon*, gen. nov., with elongate skull, high sagittal crest, small premolars and serrate canines.

(The distinctions between the first two genera are better displayed in the referred species, *D. felinus* Scott and *P. inflatus* Hatcher, than in the typical species *D. vetus* Leidy and *P. hartshornianus* Cope, which, as

* The words are quoted from Engelmann (p. 172) and differ slightly from those in Carus and Engelmann.