

29, 1892. The eastward prolongation of the ancient bluffs is probably not continued in the line *yz*, but bending east about where the turn occurs in the courses of Lost Creek and Shell Creek. The former is a considerable stream so long as it has the impervious Cretaceous shales for a substratum, but soon disappears when it encounters the deep mass of silt in the Platte valley.

There is no evidence, so far as I know, that the Platte has ever shifted out of its old rock bed, except during the transient episode at Sand Creek. The existence of a gorge excavated in Mesozoic and Palæozoic rocks, once five hundred feet deep though now silted up to its brim, is the best reason for its present course. Nor can any inferences respecting the influence of rotation be drawn from the trend of this gorge, for the reason that a considerable part of it was formed by a stream which flowed *west*. When the Platte first stretched across the plains, its several parts of different ages and opposite flow being united in one great river, it found a ready-made channel, to which it has, in the main, steadily adhered. The hypothesis that it once flowed in the channel of the Loup fares badly in the light of the facts, and, looking across to the southward, we find no evidence that it ever flowed in any of the numerous heads of the Blue, as suggested by Professor Davis. None of them has any marked pre-eminence over the rest, and all of them are slight recent furrows, mostly below the level of the Platte, so that it must have shifted up-hill if it once flowed in them.

The suggestion that it once flowed in Prairie Creek falls into a different category, since this stream is within the old rock trough. But it is a mere pin scratch in a wide alluvial plain, any other line of which is just as likely as that to have been the flow-line of the Platte at some period. Of course this great river has shifted about within its rocky gorge. The most significant fact in respect to the influence of rotation is that it now, in many places, crowds upon the south bluffs, as shown in Fig. 2.

It is agreeable to have the concurrence of Professor Todd in my opinion that "the Loups did formerly flow through to the Platte." I trust he will not recede from this harmonious attitude in consequence of finding it impossible to put the Platte over into the Loup in order to get them together. Strictly speaking, however, that is not impossible. A big canal would accomplish it literally. The real difficulty is to get the Platte back to its present higher channel. It is not now a constructive stream, building up its bed above the surrounding country, else we might suppose that it had shifted to its present position and then built it up above the Loup. It has not probably been a constructive river at any time since the Rocky Mountain uplift emptied Lake Cheyenne, and gave the Platte such a steep gradient that it is able to accomplish a little vertical erosion in spite of its great burden of sediment. It trembles on the verge between vertical erosion and deposition, the balance inclining to the former, but so slightly that it maintains its levels with great steadiness. Herein lies another reason for doubting that great changes of level have recently occurred in its valley.

L. E. HICKS.

Lincoln, Neb.

Sistrurus and Crotalophorus.

ON page XXVI. of the introduction to a work on North American Reptiles, in the "Memoirs of the Museum of Comparative Zoology," VIII., 1883, the name *Sistrurus* was applied to one of the two genera of rattlesnakes because *Crotalophorus*, the previous title, was a synonym for *Crotalus*, the other genus. Professor Cope, in his latest paper on the serpents, Proc. U. S. Mus., 1892, p. 324, objects to the change in these terms: "Mr. Garman, has named this genus *Sistrurus*, on the ground that the name *Crotalophorus* was preoccupied at the time it was employed by Gray. This does not, however, seem to be the case. It is true that Linnæus uses it instead of *Crotalus* in the sixth edition of the *Systema Naturæ* (1748, p. 35), but the system of nomenclature thus adopted is not binomial, so that the names are not authoritative as against later ones." This makes a considerable display of lack of caution, to say the least of it. If use by Linné in the sixth edition of the *Systema* (as also in the seventh and the ninth editions, and the *Amoenitates*) was all that bore on the question there might be nothing to say. But in proposing the new name I had in mind

more than appears from the citation. Linné and Gronow only were mentioned. The dates for the latter were 1756 and 1768, which brings us within the range of the tenth edition, 1758. Gronow might be put aside as unsound binomially. If so, I still had Houttuyn, 1764, who certainly regarded the names as synonymous, for he says, "De geslagmaam deezer slangen, *Crotalophorus*, en by verkorting *Crotalus*, is afkomstig van den ratel, dien zy aan't end der staart hebben." But, again, if not allowed to go farther back than the twelfth edition, 1766, there was another authority for *Crotalophorus* instead of *Crotalus*, Vosmaer, 1768, according to whom, "De Heer Linnéus geeft de benaaming van *Crotalophorus* aan dit geslacht, in het welk hy drie onderscheidene soorten heeft opgeteekend, die hy *Horridus*, *Dryinas* en *Durissus* noemt."

Under the name *Crotalophorus*, 1748-68, neither Linné, Gronow, Houttuyn nor Vosmaer included any of the species of the genus defined by Gray, 1825, with the same name. That they were not binomial authorities may be urged against Linné and Gronow, but not against Houttuyn and Vosmaer, who, though they retained the earlier name, adopted the genus and the species from the tenth edition of the *Systema*. Linné dropped *Crotalophorus* for *Crotalus* in 1758. In 1766 he described the first species of the other genus, placing it in *Crotalus*, where it was kept by most authors until removed by Gray. The necessity of the change I have made in the name of Gray's genus is best shown by a concise view of the synonymy for the two genera.

Crotalus.

Caudisoma Linn., 1735-47; Laur., 1768; Flem., 1822; Cope, 1861-71; Coues, 1875.

Crotalophorus Linn., 1748-56; Gronow, 1756-63; Houtt., 1764; Vosm., 1768.

Crotalius Linn., 1754.

Crotalus Linn., 1758-66; Daud., 1803; Merr., 1820; Gray, 1825-49; Fitz., 1826-43; Wagl., 1830; Holbr., 1842; Bd. and Gir., 1853-59; Dum. Bibr., 1854; Cope, 1859, 1875-92; Garm., 1883. (Many omitted. In most cases, from 1766 till 1825, a species of *Sistrurus* was included.)

Crotalinus Raf., 1815.

Uropophus Wagl., 1830; Gray, 1831-49; Fitz., 1843.

Urocrotalon Fitz., 1843.

Aploaspis Cope, 1866-75.

Aechmophrys Coues, 1875. (The last four apply to particular species.)

Sistrurus.

Crotalophorus Gray, 1825-31, 1849; Holbr., 1842; B. and G., 1853-59; Cope, 1859, 1866-92.

Caudisoma Fitz., 1826-43; Wagl., 1830; Bon., 1831; Gray, 1842; Yarr., 1875; Cope, 1875-80.

Crotalus Flem., 1822; Cope, 1860; Coues, 1875.

Sistrurus Garm., 1883.

S. GARMAN.

Mus. Comp. Zool., Cambridge, Mass.

"Scientific" Genealogy—Rejoinder, No. 2.

QUITE recently I contributed to these columns (*Science*, Vol. XIX., No. 476. "Scientific Genealogy—A Rejoinder.") a brief paper intended to curb some tendencies prevalent in genealogical circles, notably untenable assumptions regarding family traits and likenesses inherited.

Since the appearance of the above article several criticisms have been sent to this magazine—rather surprising to "Veritas" for the reason that they indicated a lack of acquaintance with what he opposed in the article.

General discussions of biology, breeding of animals—human and brute—are, I doubt not, of interest and profit, only,—they hardly touch my point in the argument, and it is important in open discussion to keep to the question,—so many readers mistake a rambling generalization for argument and fact. Then, too, I object to portions of the article by "Enquirer," namely, p. 155, paragraphs 1 and 4, as mistakenly quoting my views (for light on which my article is in evidence) and also to his last para-