plished, but he says it is so long ago he no longer remembers the course of reasoning he followed at the time.

I assume that Capt. C. E. Dutton, who at Powell's request took up and completed the latter's Colorado cañon geology, is likely to have voiced his matured opinion on this point. In his paper on the Grand Cañon (2d Ann. Rep. Director U. S. Geol. Survey, p. 62), in treating of the persistence of rivers, Dutton gives a most graphic description of the course of the Green river in its passage through the Uinta mountains. In spite of the fact that he places Horseshoe Cañon on the south instead of on the north flank of the mountains, it is evident that he must have read Powell's description, for he uses not only his metaphor about the 'right of way,' but also the simile of the saw preserving its position while the log moves. Whether consciously or not, however, he certainly does not agree with Powell's hypothesis, for he says in conclusion: "What then did determine the situations of the present drainage channels? The answer is that they were determined by the configuration of the surface existing at or very soon after the epoch of emergence. Then, surely, the water courses ran in conformity with the surface of the uppermost (Tertiary) stratum."

Dutton elsewhere states more definitely that the course of the Green or Colorado river south of the Uinta mountains was determined at the close of the Eocene. If this is correct, I was probably wrong in assuming that the Green river first found its way across the Uinta mountains after the Wyoming (Bishop's Mt.) conglomerate had been deposited, because I found undisturbed remnants of this formation on either side of the river, both on the north and south flanks of the mountains and at such elevations that, if the beds were continued across the intermediate country on the same level, they would completely cover that portion of the mountains through which the Green river now runs. I have for a long time been hoping and still hope that some other geologist may make a more thorough examination than I was able to at that time, and determine the nature and extent of this singular formation, which has never been satisfactorily accounted for. Whatever may be the outcome of such an examination, it would seem proper that the antecedent origin of this river should be held in abeyance until some positive evidence of it can be furnished.

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U. S. GEOLOGICAL SURVEY.

ZOOLOGICAL NOTES.

THE SCIENTIFIC NAME OF THE VISCACHA.

ONE of the best known mammals of the pampas of the Argentine Republic is the viscacha, now usually called *Lagostomus trichodactylus*. Unfortunately this name proves to be untenable, but in order to show that such is the case it will be necessary to refer briefly to the history of the species. The animal was first described in 1801, by Azara, who considered it identical with *Cavia acuschy* of Gmelin, which is now known to be an entirely distinct species. Rafinesque, in 1815,* proposed the genus *Viscacia*, apparently without description, so that his name is not entitled to recognition. One year previous, in 1814, according to Waterhouse (Nat. Hist. Mamm., Rodentia, 1848, p. 213), a living viscacha was placed on exhibition in London,† where it was examined by Blainville and Cuvier. Blainville soon after described the species as *Dipus maximus*.‡ Some years later the same animal came into the possession of Brookes, a member of the Linnæan Society of London, who gave a full description both of its

* Analyse de la Nature, 1815, p. 56.

† Burmeister states that there were two.

‡ Nouv. Dict. d'Hist. Nat., nouv. éd., XIII., 1817, pp. 117–119.

skeleton and of its external characters in a paper read before the Society on June 3 and 17, 1828.* Brookes recognized the fact that the viscacha belonged to a distinct genus which he named *Lagostomus*. He also changed Blainville's specific name *maximus* to *trichodactylus* on the ground that it became inappropriate in connection with a genus represented by only one species. Authors who have adopted *Lagostomus trichodactylus* have reduced *Dipus maximus* and other subsequent names to synonymy, but, almost without exception, have overlooked one of the most important references to the species.

In 1824 Schinz began the publication of his 'Naturgeschichte und Abbildungen der Saugethiere,' and on page 244 of this work gave a full description of the viscacha, calling it *Vizcacia pamparum*. A comparison of the title pages of this work (1824) and of volume XVI. of the Transactions of the Linnæan Society (1828) seems to indicate that *Vizcacia pamparum* Schinz has 4 years priority over *Lagostomus trichodactylus* Brookes. Although Schinz's name was undoubtedly published first, its actual date of publication is uncertain. Schinz's Naturgeschichte appeared in 29 Hefte, at intervals from 1824 to 1828, and, as the description of the viscacha is inserted near the middle of the book, it was probably not published before 1825 or 1826. I have been unable thus far to ascertain the dates of publication of the separate parts of the Naturgeschichte, but in the copy examined is a notice to subscribers, printed for distribution with the 29th Heft, and dated February 28, 1828, stating that this is the concluding part of the volume. Schinz's work was evidently completed several months before Brookes' paper was even read, and possibly a year before it was actually published, if we accept the statement in Oken's Isis (1830, p. 906) that the latter appeared in 1829.

Vizcacia therefore, is, probably not less than 2 years earlier than *Lagostomus*, and, as the objection to Blainville's specific name would not be considered valid by modern zoologists, the species should stand *Vizcacia maxima* (Blainville).

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* Trans. Linn. Soc. London, XVI., pt. I, pp. 95–104, 1 plate.

Current Notes on Physiography.

Bosphorus, Rhine and Hudson.

Philippson's 'Geologisch-Geographische Reiseskizzen aus dem Orient' (Sitzungsber. Niederrhein. Gesellsch., Bonn, 1897) include, among many other items of interest, a clear account of the Bosphorus as a partly drowned valley incised in an uplifted peneplain of deformed Devonian strata. Viewed from the summit of Bulgurlu, a low quartzite monadnock that surmounts the upland east of Skutari, the peneplain, only here and there interrupted by rounded knobs and ridges, is seen to ascend slowly northward, and then to rise in a marginal ridge of harder strata along the border of the Black Sea. The upland is generally unoccupied, being rather barren, in part from natural infertility, in part from exhaustion of the soil such as characterizes the vicinity of nearly all the great millenial cities of the Mediterranean. The Bosphorus trench has a winding course, the water surface being 200–300 met. beneath the upland. The water is generally 50 met. deep, but becomes shallower near Constantinople, as if by the washings and waste from that old city. Philippson justly compares the gorge of the Bosphorus to that of the Rhine. A still closer analogy might be found with the gorge of the Hudson, since the latter is a drowned river, deep and navigable to large vessels, while the Rhine is a running river, comparatively shallow in the gorge and interrupted by rapids and islands.