

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 Säugethiere,' 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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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 millennial 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.

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

Speaking of the Rhine, mention may be made of a geological essay by Rothpletz, of Munich (Das Rheinthale unterhalb Bingen, Jahrb. k. preuss. geol. Landesanst., 1896, 10-39), in which it is shown that for about four kil. in the head of the gorge it follows close upon a narrow block between two sub-parallel faults of considerable dislocation. Although no vertical movement is proved for the block, the author concludes that there was a 'direct genetic connection' between the dislocation and the origin of the gorge, for similar disturbances seem to be wanting in the uplands (Taunus) further east. It may, however, be objected that until the date of the dislocation is shown to be recent, and until the movement of the block is shown to be downward, it is premature to make too close an association of these two phenomena. If, as is very possible, the dislocation is ancient, all sorts of happenings may have intervened before the river gained its present course; and among the factors that determined its location, the dislocation may have had a relatively subordinate rank. To place ancient structural disturbances in direct genetic connection with the location of a very modern river gorge suggests that a great many intermediate processes are overlooked.

THE GEOGRAPHY OF BRITTANY.

PROFESSOR CHARLES BARROIS, of Lille, long occupied on the intricate geology of Brittany, has recently presented a summary of its geographical divisions, with a special chapter on the influence of its physiography on its advance in civilization (Ann. de Geogr., VI., 1897, 23-64, map). The region is composed of ancient rocks, strongly folded and dislocated on east and west lines, whose trend diverges inland. To-day the surface is that of a dissected peneplain, with even skylines and a gradual descent to the north and south, the former steeper than the latter. The author believes that the

ancient mountains indicated by the structure have been removed by subaërial weathering and washing, not by marine erosion. The existing longitudinal drainage lines do not occupy synclinal axes, but follow open valleys or *combes* along the strike of weak strata, after the fashion of subsequent streams. The transverse rivers, by which the inner belts of low ground are drained, cross the uplands in sharp trenches or *cluses*, across which viaducts and suspension bridges are carried above the steeples of the valley villages. These transverse streams are called *consequent*, as if determined by the lateral slopes of the original deformation (post-Carboniferous); their possible origin by superposition from a Mesozoic cover, now stripped away, is not explicitly considered. In this respect the suggested comparison of the drainage on the ancient folded structure of Brittany with the rivers of the relatively young and simple dome of the English Weald does not seem to be fully warranted.

INSEQUENT RIVERS.

INITIAL land forms, due to uplift, deformation and other non-destructive processes, are gradually carried through a systematic series of sequential changes, chiefly under the action of streams, sometimes under the action of waves, wind or ice. Omitting antecedent streams from present consideration, the first streams to be developed on an initial surface are the *consequent* streams, so named by Powell. If the valley sides of the consequent streams lay bare a disordered structure of variable resistance, gullies and ravines will grow along the guidance of the weaker structures, and thus *subsequent* streams will be developed by headward erosion; the term *subsequent* being first used in this connection by Jukes, although not in a technical sense. It sometimes happens that no guiding weak structures are revealed on the consequent

valley sides; such being the case when the rocks are either homogenous or horizontally stratified. Then the side streams, growing headwards, are accidentally located; and streams of this class have been called *auto-genetic* by McGee. *Insequent* may prove to be a more satisfactory name for such streams, as it is of the same etymological family as *consequent*, *subsequent* and *obsequent*; the latter being defined in the *London Geographical Journal*, V., 1895, 134. As *insequent* has proved servicable in my lectures during the past winter, it is now submitted for trial by others.

NEW TERMS IN GEOLOGY AND GEOGRAPHY.

WITH a protest against the introduction of new terms in geology as a rallying cry, a good friend of all geologists has unfurled his banner to the breeze in a recent number of *SCIENCE*, as if inviting those who are of his opinion to enlist in a crusade against a threatened inundation of scientific verbiage. Those holding other opinions may prefer to enlist in friendly opposition in another camp, under the leadership of a geologist who said some years ago that he felt he had accomplished a good piece of work by introducing a new name for certain deep-seated igneous structures. For one, I dissent entirely from the dictum that new terms are 'evidently nothing more than a useless incumbrance to the science' of geology. New terms are an absolute necessity in any science that is advancing. Useless terms are of course objectionable, but who shall say which are the useless ones? New things and new ideas must have new names. There is too much good new wine to be held in old bottles. 'The common run of educated people in this country' are entirely excusable if they know nothing of such new terms as monadnock and peneplain, or of such older terms as novaculite and bauxite; for their ignorance and their opinions are irrelevant in technical mat-

ters. The investigator and the specialist must be left as free to name their conclusions as to reach them; and they, much better than any one else, can judge of the need of new names. By all means, let them be cautious and avoid unnecessary names; but unless they can number their new finds, as astronomers number new asteroids and new comets, they must name them. Having invented a new name, they may well let it take its chances in the struggle for existence. If it prove acceptable to workers in its field, it will take root and flourish; if not, it will soon wither away and be seen no more. As far as new terms in physiography are concerned, I have had a good share of amusement in watching the fate of certain words that have appeared in recent years. Some have survived and some have perished. Among several that appear to be destined to survive, although not generally used at present, let me commend 'subsequent,' 'adjusted' and 'graded' (ordinary words used in a technical sense), 'obsequent' and 'insequent' (new-made words of English form), and 'doab' and 'cuesta' (imported foreign terms), to the attention of those who maintain that new terms are evidently nothing more than a useless incumbrance to a science. It will be interesting to note the standing of these words ten or twenty years hence. The amount of attention given then or now by teachers and students to physiography—or geomorphy, as some neologists would call it—may be measured by the terseness and precision with which they express the ideas or things represented by these words and their fellows.

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CURRENT NOTES ON ANTHROPOLOGY.

CENTRAL AMERICAN CARIBS.

THE Caribs, who spread so widely over South America, never reached any part of