

mountains, including the Karoma (11,480 feet) and the Aisemal (7,080 feet).

M. A. Wauters, at the recent meeting of the Geographical Congress held at Brussels, read a paper on Cesar's *Portus Iocius*, which, like Danville, Gosselin, and others, he identifies with Wissant, half way between Calais and Boulogne. That place, variously known as Cuiso, Esseau, Guizant, and Widsand during the Middle Ages, was formerly a place of considerable importance, and M. Wauters thinks that by restoring its ancient port prosperity might return to it.

Dr. J. Hann's 'Einführung in die Meteorologie der Alpen' forms part of the "Instructions for Scientific Observations during Alpine Journeys," which are being issued by the Austro-German Alpine Club. The author—one better acquainted with the subject could not have been selected—presents us with a popular view of Alpine meteorology, points out the observations which Alpine travellers may profitably undertake, and recommends the instruments best suited for the purpose. He suggests, *inter alia*, that the direction of the wind should be noticed by tourists or guides on the summits of elevated mountains, the results to be forwarded to the committees of the various clubs, and to be tabulated at the close of each year. The use of Baudin's "thermomètre fronde" is strongly recommended.

THE CARINTHIAN BARROWS.

I HAVE lately been inspecting the group of barrows (*gomile*, *acervi*, *Heidengrabe*) to which I alluded in my letter from Laibach (*Athen.*, August 16th), and perhaps your readers may like to hear the results.

Leaving Steinbrücke, the junction of the Agram Railway with the Südbahn, and the confluence of the turbid yellow Sän with the glastone or blue-green Savé (Savus or Sau) river, you cross the latter by a platform-ferry of the earlier historic type, useful to keep off excursionists. The carriage road then runs down the right bank to Markt Ratschach (*ratjak*, "among the crabs"), whose ruined castle rises high above the little Sapotka affluent. Here the "Narrows," which began near Laibach, and which in places reduce the Save to a hunter's leap, flare out into a small plain on the right or southern side. Another gate leads to another broad at Sauenstein; and, after the last gut at Lichtenwald, the great Croatian valley-plain opens at Gurkfeld.

Beyond the Sapotka begins the Weixelstein ("Cherry-tree Rock") property of our kind friends, Gutmansthal-Benvenuti. A drawing of the castle, which in those days belonged to the Barons of Zetscheher, now extinct, is given in Valvasor's noble old monograph 'Die Ehre des Herzogthums Krain,' two portly folios printed at Laibach (Labaci) in 1689, and now being republished in numbers.

The tumuli occupy the limit of the Weixelstein flat, the raised river-bank in geological ages, about 150 feet above the water, a mile or so from Ratschach, and bounding the highway to Agram. The Slav name is the generic *Dubrava*, or forest, although the *Dub* or oak has long made way for beech and pine (*P. Austriaca*) on the upper levels, while the lower slopes are *weinberge*. A sketch by M. Nicolas Gutmansthal shows the disposition of the five larger barrows, two being the base of trees, which are not over seventy years old. The *gomile*, about twenty feet in diameter, are of humus overlying yellow clay. That in the centre was opened on August 21st and 22nd. At a depth of about a metre and a half appeared on the western side a cinerary vase of the coarsest pottery, imperfectly burned. It was not protected by a kist, nor were there any signs to show its ownership. Mamiform protuberances appear on the fragments.

The Slovenes of Lower Krain are a floating population; when a family does not like the place, it sells off and wends its way. Thus tra-

ditions are rare and evidently modern. Yet the people have preserved a legend of a *Heidenkapelle* ("heathen chapel"). Possibly it alludes to a building which stood upon the plain below Dubrava, at the farm called "Hotemesch" (Thomas Hoch = Hoch Thomas = Hotemesch). Whilst a field was lately being ploughed the share struck upon a stone, and some fifteen slabs were disinterred. The material, a fine, hard, white saccharine marble, with raised veins of quartz, has been brought from some distance; it is evidently the *Bacherer Marmor* of Styrian Marburg. The remnants are now collected under a dwarf avenue, forming seats and a table; the latter is a curiously bevelled plate, 2.6 metres in length. The work was apparently unfinished: there are two roughly-hewn column capitals; two others which may be pilasters; and yet two which are trimmed into cornice and corner shape. Most of them are pitted with pick holes; and a smaller slab bears // // //, which may be a mason's mark. One of the two cornices or coping pieces, whose greatest length is 1.6 metres, breadth 1.3 metres, and thickness 0.10 metre, shows on the northern side two horizontal and parallel lines, evidently artificial, and measuring 1.48 metres. Between them are various perpendiculars and obliques, amongst which I detected an evident Φ and a Ψ . The general appearance is Runic. Enclosed are two squeezes which have not been very successful; they prove, however, I think, that the marks are letters. The presence of Runes in a country so distant from their origin is easily accounted for.

I see in the *Daily News* a letter from Mrs. Crosse (August 20th) upon the 'Drying of Hay,' quoting from the *Athenæum* of August 16th. The "harps," which the Slavs call *Kos* or *Kosar*, are hereabouts confined to Carniola; at any rate, they do not extend to Styria. In the single and simplest form the height would be nine to ten feet, and the length five to seven yards, with eight or nine parallel bars. The roof, of tile or thatch, is made of sufficient breadth to cover the hay. In England, where timber is expensive, the uprights could be made of brick and the horizontals of iron. Some such precaution appears recommendable for our rain-drenched south-western counties; but the bucolic mind is not addicted to easy change. At any rate, the *Harpfen* appear, on the whole, to be a better system than those hitherto proposed: weather hurdles, pitting in earth, and drying by the hot blast.

In the *Athenæum* of August 30th Mr. A. R. Fairfield proposes to derive "tabor" from *tábiyah* (redoubt) or *táb* (strength); ending with a suggestion that the "Wends of Carniola" may have adopted the first form from the Magyars. But why go so far? The Turks have again and again swept through the whole country, seaboard and interior, as far as Carinthian Klagenfurt. Within a few miles of Trieste there is a village called Reppen-Tabor, whose ruined castle is supposed to have belonged to the Templars. The Slovenes might easily have taken *tabor* direct from the Turkish soldiery.

RICHARD F. BURTON.

P.S.—If plans and elevations of the *Harpfen* are required I can easily supply them. The forms vary from the simple "clothes-horse" to a complicated barn. Mrs. Crosse (*Athen.*, Sept. 6th) is doubtless right about the pile-villages of the Atersee discovered in 1870. I should have called those of the Laibacher Torfmoore the first known to this part of Austria—to Krain. Will Mrs. Crosse tell me where her son published an account of his "extensive discoveries"?

SOCIETIES.

ASTRONOMICAL.—Nov. 14.—Lord Lindsay, President, in the chair.—Rev. J. L. Challis, Prof. J. J. Astrand, Messrs. W. C. Armstrong, T. W. Bithrey, G. H. Darwin, H. T. Vivian, and R. R. Webb, were elected Fellows.—Prof.

Adams read a paper 'On the Ellipticity of Mars and its Effect on the Motion of the Satellites.' Prof. A. Hall's observations showed that the planes of the orbits of both satellites are inclined at small angles to the plane of the planet's equator. Mr. Marth has in a recent number of the *Astronomische Nachrichten* investigated the motion of the nodes of the orbits of the satellites on the orbit of the planet, which will be due to the disturbing action of the Sun, and he concludes that, if there is no force depending on the internal structure of Mars which modifies the Sun's action, the nodes of the orbits will be in opposition to each other a thousand years hence; but Prof. Adams pointed out that this motion would be materially affected by the disturbing force due to the ellipticity of the planet, which would cause the nodes of the satellites to retrograde on the plane of the planet's equator. The ellipticity of Mars is too small to be observed, but the motion of the nodes will probably afford a means of determining the ellipticity of the planet within very definite limits. A protuberance at the equator of Mars would also cause rapid motions of the apses of the orbits of the satellites, particularly of that of the inner one, and as this orbit appears from Prof. Hall's observations to have a sensible eccentricity, it will probably afford a still more exact means of determining the ellipticity of the planet. Mr. Marth mentioned that the observations made at the recent opposition appeared to show that the axis of the planet was not inclined at an angle of 27°, as had been hitherto supposed, but was probably inclined at an angle of only about 25°. In order to proceed with the investigation suggested by Prof. Adams, the position of the axis of the planet would need to be more satisfactorily determined.—Mr. Stone read a paper 'On the Evidence of a past Connection between four widely separated Southern Stars, ζ Tucani, ϵ Eridani, ζ Reticuli, and γ Reticuli,' all of which possess large proper motions. There appears to be a common proper motion of the whole group amounting to more than 1' of arc, and though two of the stars are separated by a distance of 19', it would seem that some 300,000 years ago they were all probably close together, and may have consisted originally of two systems of double stars with large proper motions like a Centauri.—Dr. Schuster read a paper 'On the Polarization of the Corona.'—The President mentioned that he had obtained an observation of Deimos at Duncecht, and Mr. Common stated that he had on four or five nights obtained observations and measures of both the satellites of Mars with his 37-in. reflector. Observations of Deimos had also been obtained at Greenwich.—Capt. Noble showed sketches of Jupiter with the great elliptical red marking in the southern hemisphere, which has recently attracted much attention.

ASLATIC.—Nov. 17.—Major-General Sir H. C. Rawlinson, President, in the chair.—General W. W. Anderson, Lieut.-Col. Léwin, Prof. F. W. Newman, Capt. St. Barbé Brown, Messrs. E. Arnold and S. Austin, were elected Resident Members; Col. S. A. Madden, Lieut. R. C. Temple, Messrs. C. Stephen, W. J. Addis, C. Rustomjee, W. Irvine, P. C. Wheeler, Babu Ramchandra Ghose, and W. Craig, were elected Non-Resident Members.—Paper was read by the President 'On the Historical Value of the newly discovered Cylinder of Cyrus the Great,' noticed in the *Athen.* for Nov. 8th, and by Mr. R. Sewell 'On Hiouen Tsang and the Amravati Stupa.'—In the first, Sir H. C. Rawlinson showed that we have now an undoubted native record of the genealogy of Cyrus in the order, 1. Achæmenes; 2. Teispes; 3. Cyrus; 4. Cambyses; 5. Cyrus the Great, as stated by Herodotus; and called attention to many curious matters relating to the religion then prevailing in Babylonia recorded on this monument.—In the second, Mr. Sewell ex-