high and low tropical regions. (2) In the question of colonisation, tropical temperatures and the race of the colonist play only secondary *rôles*. (3) Colonisation on a large scale—that is colonisation of the masses—ought to be stopped.

A NEW volume of the late Baron Uslar's great work on the languages of the Caucasian mountaineers has just been issued at Tiflis, by the Department of Education. It is devoted to the Kyurin language. The Kyurins are a small stem, inhabiting the banks of the Samur river, in the north of the Daghestan plateau. For a long time they were under the rule of the khans of Derbent, Kuba, or Kazikumukh; but in the second half of the last century a separate Kyurin khanate came into existence, and maintained itself up to 1866, when it was conquered by the Russians. The Kyurin language, which has many sub-branches, must be considered as an independent linguistic unit, while its pronunciation varies with nearly every separate village. The first part of Baron Uslar's work contains a description of the leading features of the language and its grammar; while the second part is a dictionary of Kyurin words.

The current number of the *Zoologist* contains an interesting article, by Mr. A. Holte Macpherson, on "Some Observations on the Note of the Cuckoo." During the spring and early summer of the present year the author took every available opportunity of listening to the cuckoo, and enlisted in his service many friends to do the same, his purpose being to determine, if possible, the pitch of the bird's voice, and the duration of the interval between the notes of its call. An analysis of the reports in his hands shows that when the bird is in full song the interval is usually greater than the minor third, and is to all intents and purposes a full major third. Not infrequently the bird utters three notes. At Haileybury, on June 7, it was heard to sing E flat, D C two or three times, then it omitted the middle note, singing a minor third. Two other birds are reported to have sung F F C and F, D flat, and C, respectively. As regards the pitch, out of hundreds of recorded calls during the period when the bird was in good voice, the upper note in nineteen cases out of twenty was from F to E flat, and the lower note from D to B. The author comes to the conclusion that the average call is E and C in the middle of the piano.

WITH its current issue, our contemporary, *Science Progress*, enters upon a new phase of its existence. It has been enlarged, and will in future appear quarterly, instead of monthly, at a slightly increased price.

Bulletin No. 57 of the Experiment Station of the Kansas State Agricultural College, Manhattan, is occupied by a descriptive list of "Kansas Weeds," accompanied by upwards of twenty plates of drawings of the leaves or other characteristic organs.

Timehri (June), the journal of the Royal Agricultural and Commercial Society of British Guiana, contains the following scientific contributions: "Multiple Evaporation," by W. P. Abell; "Queer Homes" (an account of nests built in peculiar places), by C. A. Lloyd; "Note on Berbice Bats," by Dr. C. G. Young; "India-Rubber Collection at Para," by J. A. Coelho. In addition to the foregoing, there are a number of articles of commercial interest.

MR. BERNARD QUARITCH has sent us his catalogue, dated September, containing a great many works relating to mathematics, microscopy, mountaineering, naval sciences, ornithology, palæontology, travels and zoology. Among the books mentioned we notice a complete set of the "Philosophical Transactions of the Royal Society," with general indexes; a set of the "Transactions of the Linnean Society," from 1791 to 1891; the "Proceedings and Journal of the Linnean Society," from 1838 to 1895; and the "Proceedings of the Zoological Society," from 1830 to 1894.

A CATALOGUE of meteorites in the collection of the American Museum of Natural History, New York, by Mr. E. O. Hovey, has been received. The collection consists of fifty-five slabs fragments and complete objects, representing twenty-six falls and finds. The source of each specimen, also the dates of discovery, and the individual weights in grams, is given in the catalogue, which should be of interest and service to many visitors to the museums and others.

WE have received the *Bulletin of Miscellaneous Information* of the Royal Botanic Gardens, Trinidad, for July. Among the "Natural History Notes" is a very interesting account of the life-history of the parasol ants, *Atta cephalotes* and *octospinosa*, with drawings of the various forms—the male, queen, soldier, worker major, worker minor, nurse, and gardener. Mr. J. H. Hart, the Superintendent, confirms the statement of Belt that these ants carry vegetable matter into their nests, not as food, but as a material on which to grow the fungi on which they feed. The destruction caused by various species of parasol ant in the Western Tropics is a matter of very serious importance to the agricultural industries.

WE have received the *Bulletin Meteorologique et Seismique de l'Observatoire Imperial de Constantinople* for February of this year. In this is given a list of the earthquakes observed during this month in the East, and more especially those occurring in the Ottoman Empire. The number seems to be considerable, no less than twenty-nine being described. The meteorological observations for this month are also given, the Director of the Observatory, Salib Feky, adding a *résumé* and his usual monthly *revue climatologique*.

THE additions to the Zoological Society's Gardens during the past week include two Bonnet Monkeys (*Macacus sinicus*, ♀ ♀) from India, presented by Mrs. Strutt; a Macaque Monkey (*Macacus cynomolgus*, ♀) from India, presented by Mr. J. Laverock; a Ring-tailed Coati (*Nasua rufa*) from South America, presented by Miss M. E. Clarke; a —— Squirrel (*Sciurus* sp. ?) from Monravia, West Africa, presented by Mr. Ellis Edwards; an Orange-cheeked Amazon (*Chrysotis autumnalis*) from Honduras, presented by Mr. Baratti; a Common Heron (*Ardea cinerea*), British, presented by Mr. E. J. Poyser; four Montague's Harriers (*Circus cineraceus*), British, presented by Mr. W. J. Laidlay; three Pin-tailed Sand Grouse (*Pterocles alchata*) from Spain, presented by Mr. G. P. Torrens; six Rough Terrapins (*Clemmys punctularia*) from Para, presented by Dr. E. A. Goeldi; a short-tailed Wallaby (*Halmaturus brachyurus*) from Australia, deposited; two Ruffs (*Machetes pugnax*), British, purchased; an African Lepidosiren (*Lepodosiren annectans*) from West Africa, received in exchange.

OUR ASTRONOMICAL COLUMN.

THE SOLAR ROTATION.—In the August number of the *Astrophysical Journal* there is a brief summary of the work being done at John Hopkins University by Mr. Lewis Jewell. These researches dealt with the question of the solar rotation, and Mr. Jewell's recent work in measuring a large number of lines in photographs of the solar spectrum has brought out, as is stated, a new and remarkable peculiarity in the law of the solar rotation. The following is a brief extract of the note in question. "It is found that there is a difference of several days in the rotation periods of the outer and inner portions of the sun's atmosphere, the period increasing as the photosphere is approached. The measures also show the equatorial acceleration to be much the greatest for the outer portions of the atmosphere. At the lower levels the acceleration is small, there being little difference in the periods for different latitudes. It is further found that the carbon (cyanogen) lines and the shaded portions of H and K take their rise very low down in the solar atmosphere. Mr. Jewell is at present engaged upon the reduction of the measures."

A NEW SPECTROSCOPIC BINARY.—Prof. E. C. Pickering, in Circular (No. 11) of the Harvard College Observatory, dated August 31, informs us that Prof. Solon I. Bailey has found μ^1 Scorpii to be a spectroscopic binary. This star is $-37°\cdot11033$=S.M.P. 5794; its approximate position for 1900 is R.A. 16h. 45·1m. Decl. $-37°$ 53′, its photometric magnitude being 3·26. A neighbouring star μ^2 Scorpii follows about 28s., is 1″·7 north, with a photometric magnitude of 3·74. As these two stars were close alongside on the photographic plate, a comparison was easy. The spectrum of the first-named is described as of the first type, with the additional lines characteristic of the Orion stars. In some of the spectra they are scarcely distinguishable, while in others the lines of the first are broad and hazy, some, more faint, being distinctly double. Mrs. Fleming, who examined these plates in 1894, recorded these lines as being double, but the plates were put away for further examination, and subsequently overlooked. An examination of the three plates sent to Cambridge showed that the lines in the spectrum of μ^1 were single on October 2, 1892, wide and hazy on July 20, 1894, and double on July 31, 1894. A more minute examination has shown that the changes are very rapid, a period of 35 hours and a nearly circular orbit having been deduced by Prof. Bailey from a discussion of fifty-two photographs. An independent discussion at Harvard gives the average period of 34h. 42·5m., with an error of less than 6s. Ten observed times, when the lines were single, are represented with an average deviation of 38 minutes each; the maximum deviation is less than an hour. Other stars of this class, only two of which are already known, are ζ Ursæ Majoris and β Aurigæ. The former was discovered by Prof. Pickering in 1889; it has a period of 52 days, and is irregular. The latter we owe to Miss A. C. Maury; the period of this is regular, and is of nearly four days in length.

THE VARIABLE STAR Z HERCULIS.—A point of great importance, but not sufficiently attended to by those who compute variable star observations, is referred to by Mr. Paul S. Yendell in *Astronomical Journal*, No. 20. It is well known that outstanding observations—that is, those which seem apparently to be incorrect—are generally discarded, as leading to erroneous results in the final reduction. This is often done, for instance, when a curve is drawn through the points, representing the observations, and finally smoothed to include, as near as possible, all the data. This smoothing is carried, in some cases, to a considerable extent; in fact so far that a slight hump in the curve is looked upon as evidently due to errors of observation, and consequently smoothed over, and therefore lost so far as the results are concerned. Mr. Yendell refers to a similar "smoothing" by the rejection of observations which do not bear out the hypothesis of the calculated orbit. In the note in question, he takes the case of the four observations, made by Müller and Kempf, of the variable star Z Herculis, for the Potsdam Photometric Durchmusterung. The first and last observations satisfy the elements of Hartwig, but these latter are not in accord with observations made by Yendell in 1895. Duner's elements, on the other hand, are found to satisfy the observations of 1894 and 1895, but not those made at an earlier date at Potsdam. Mr. Yendell thus concludes that the star's period must evidently be variable, though, as he says, the character and value of the variation cannot at present be determined. He objects, however, strongly to Prof. Duner's allusion to one of his (Yendell's) observations as "evidently erroneous." This observation, as Yendell remarks, "happens to be one of the best defined and best observed of the entire series, and entirely free from any suspicion of prepossession, as is indicated by the weight attached to it."

The value of an apparently outstanding observation is further instanced by Yendell in the case of the star U Pegasi, observed by him in 1894, which he had been inclined to pass over lightly as "hopelessly discordant," but which proved in reality to have "contained the key to the whole enigma of the star's period." Other instances might be given of similar cases; but sufficient has been said to draw attention to the fact that the light of variable stars is of a more variable nature than is at present supposed. Recent observations and reductions have shown that the curves representing variability of some stars is not a simple rise to maximum and fall to minimum, but the curvature varies both on the upward and downward side of the light curve to no slight extent. Cases of this kind seem to point to the suggestion that more than two bodies are involved.

THE BRITISH ASSOCIATION.

SECTION H.

ANTHROPOLOGY.

OPENING ADDRESS BY ARTHUR J. EVANS, PRESIDENT OF THE SECTION.

"The Eastern Question" in Anthropology.

TRAVELLERS have ceased to seek for the "Terrestrial Paradise," but, in a broader sense, the area in which lay the cradle of civilised mankind is becoming generally recognised. The plateaus of Central Asia have receded from our view. Anthropological researches may be said to have established the fact that the white race, in the widest acceptation of the term, including, that is, the darker-complexioned section of the South and West, is the true product of the region in which the earliest historic records find it concentrated. Its "Area of Characterisation" is conterminous, in fact, with certain vast physical barriers due to the distribution of sea and land in the latest geological period. The continent in which it rose, shut in between the Atlantic and the Indian Oceans, between the Libyan Desert, and what is now Sahara, and an icier Baltic stretching its vast arms to the Ponto-Caspian basin, embraced, together with a part of anterior Asia, the greater part of Europe, and the whole of Northern Africa. The Mediterranean itself—divided into smaller separate basins, with land bridges at the Straits of Gibraltar, and from Sicily and Malta to Tunis—did not seriously break the continuity of the whole. The English Channel, as we know, did not exist, and the old sea-coast of what are now the British Islands, stretching far to the west, is, as Prof. Boyd Dawkins has shown, approximately represented by the hundred-fathom line. To this great continent Dr. Brinton, who has so ably illustrated the predominant part played by it in isolating the white from the African black and the yellow races of mankind, has proposed to give the useful and appropriate name of "Eurafrica." In "Eurafrica," in its widest sense, we find the birthplace of the highest civilisations that the world has yet produced, and the mother country of its dominant peoples.

It is true that later geological changes have made this continental division no longer applicable. The vast land area has been opened to the east, as if to invite the Mongolian nomads of the Steppes and Tundras to mingle with the European population; the Mediterranean bridges, on the other hand, have been swept away. Asia has advanced, Africa has receded. Yet the old underlying connection of the peoples to the north and south of the Mediterranean basin seems never to have been entirely broken. Their inter-relations affect many of the most interesting phenomena of archæology and ancient history, and the old geographical unity of "Eurafrica" was throughout a great extent of its area revived in the great political system which still forms the basis of civilised society, the Roman Empire. The Mediterranean was a Roman lake. A single fact brings home to us the extent to which the earlier continuity of Europe and North Africa asserted itself in the imperial economy. At one time, what is now Morocco and what is now Northumberland, with all that lay between them on both sides of the Pyrenees, found their administrative centre on the Mosel.

It is not for me to dwell on the many important questions affecting the physiological sides of ethnography that are bound up with these old geographical relations. I will, however, at least call attention to the interesting, and in many ways original, theory put forward by Prof. Sergi in his recent work on the "Mediterranean Race."

Prof. Sergi is not content with the ordinary use of the term "White Race." He distinguishes a distinct "brown" or "brunette" branch, whose swarthier complexion, however, and dark hair bear no negroid affinities, and are not due to any intermixture on that side. This race, with dolichocephalic skulls, amongst which certain defined types constantly repeat themselves, he traces throughout the Mediterranean basin, from Egypt, Syria, and Asia Minor, through a large part of Southern Europe, including Greece, Italy, and the Iberic peninsula, to the British islands. It is distributed along the whole of North Africa, and, according to the theory propounded, finds its original centre of diffusion somewhere in the parts of Somaliland.

It may be said at once that this grouping together into a consistent system of ethnic factors spread over this vast yet inter-related area—the heart of "Eurafrica"—presents many