

the Sangari and the Ussuri join the main stream. He is of opinion that these people are more nearly allied to the Tunguses than to the Esquimaux, the crania in his possession being remarkable for their high brachicephalic form and large cranial capacity.—In a letter from Dr. Bleek, addressed to the society, the writer draws attention to the peculiarity evinced by the Bushmen of becoming fairer and lighter in skin after they have for a time enjoyed good and abundant food, with the comforts of civilised life. This special characteristic he regards as a proof of the difference between these peoples and the negro races of South Africa, and as an evidence of their nearer affinity with more northern tribes. Dr. Bleek at the same time expresses his opinion that the dances by moonlight, which are systematically practised by the South African tribes, are connected with some form of moon-worship; while Dr. Fritsch, on the other hand, believes that these dances are in no way religious, and are simply called forth by the charm of tropical moonlit nights.—Herr Virchow exhibited some stone implements or wedges precisely similar to the so-called flint knives, which we are accustomed to assign to the Stone Age; yet these were of modern fabrication, being made in the present day in Syria, where they are used, amongst other purposes, to keep the different parts of the Syrian threshing machine (*tribulum*) in their places.

Astronomische Nachrichten, No. 2,007, contains the observations of position and magnitude of 148 comparison stars and 13 minor planets, made with the meridian circle at Berlin.—No. 2,008 contains the positions of 108 more stars, reduced to the mean equinox of 1870, and the positions of 20 planets, made by the same instrument. With the Berlin refractor the positions of some 58 planets have been determined, and some of them have been observed on a number of nights.—In No. 2,009 L. Schulhof gives an ephemeris and the following elements of Comet III. 1874, discovered by Coggia on the 19th of August:—

$$T = \text{July } 5^{\text{h}} 16^{\text{m}} 29^{\text{s}} \text{ Berlin time.}$$

$$\pi = 347^{\circ} 20' 2''$$

$$\Omega = 213^{\circ} 12' 15''$$

$$i = 28^{\circ} 25' 41''$$

$$\log q = 0.15831$$

M. Geelmuyden gives elements of Coggia's first comet of 1874, and assigns a period of 10,445 years.—D'Arrest contributes a number of spectroscopic observations of Secchi's types III. and IV.—Ormond Stone gives a note on certain expressions of the distance of a comet from the earth, and a paper on Brünnow's method of correcting the orbit of a comet.—Dr. Holtschek gives an ephemeris of Borrelly's comet, the two last positions of which are—

	R.A.	DEC.
Oct. 29 ...	6h. 21m. 9s. +	50° 37' 6"
Nov. 2 ...	6h. 5m. 11s. +	47° 36' 7"

and an ephemeris of Coggia's comet of the 19th of August—

Oct. 29 ...	5h. 0m. 41s. -	0° 12' 55"
Nov. 2 ...	4h. 48m. 46s. -	1° 49' 50"

Memoria della Società degli Spettroscopisti Italiani, August.—Fairer Secchi contributes a paper discussing the theory of solar spots set forth by Galileo, and he compares the theories and observations of Wilson, Kirchhoff, Faye, and Gautier. Tacchini adds a note discussing M. Faye's theory of the formation of solar spots, and opposing it on the ground that spots and faculae seem to accompany eruptions. Tacchini also gives notes on the positions of the chromosphere where magnesium vapour was observed in January last, and he also mentions the position of prominences accompanying spots at the limb, and containing metallic vapours. The magnesium line and 1474 occur most frequently.—Notes and measurements of the comet (Coggia) made by E. Dembwski with a 7-inch Merz, together with drawings of the nucleus, appear in this number.—Schiaparelli contributes a note on the new star observed in Sagittarius in 1690. He thinks it the same as the variable star S Sagittarius, R.A. 287° 40', Dec. 10° 18'.—Tacchini gives a table with notes showing the number of meteors, with their brightness, observed in each fifteen minutes from 10h. 30m. to 13h. 15m. on the 9th, 10th, and 11th of August last. The radiant point

	R.A.	DEC.
On the 9th, of 35, was	2h. 52m. ...	54° 56'
" " of 3, "	2h. 14m. ...	55° 43'
" 10th, of 71, "	2h. 53m. ...	54° 40'
" " of 11, "	2h. 14m. ...	56° 14'
" 11th, of 14, "	2h. 53m. ...	54° 43'
" " of 10, "	2h. 14m. ...	56° 20'

SOCIETIES AND ACADEMIES

MANCHESTER

Literary and Philosophical Society, Oct. 6.—Rev. William Gaskell, M.A., vice-president, in the chair.—On the ossiferous deposit at Windy Knoll, near Castleton, by Mr. Rooke Pennington, LL.B.—On some teeth from a fissure in Waterhouses Quarry, in Staffordshire. Mr. Pennington called attention to some teeth of a bison (*Bos priscus*) from a fissure in a quarry at Waterhouses. The animal had evidently fallen in while coming to drink at the river Hamps. It had been erroneously described as an Irish elk.—On the extent and action of the heating surface for steam boilers, by Prof. Osborne Reynolds, M.A.—Dr. Joule made a further communication respecting his mercurial air pump described in the Proceedings for Dec. 24, 1872, and Feb. 4, Feb. 18, and Dec. 30, 1873. He had successfully made use of the glass plug proposed in the Proceedings for Feb. 4, 1873. This he constructs by blowing out the entrance tube and grinding the bulb thus formed into the neck of the thistle-shaped glass vessel. To collect the pumped gases he now employs an inverted glass vessel attached to the entrance tube and dipping into the mercury in the upper part of the thistle glass.

WINCHESTER

The Winchester and Hampshire Scientific and Literary Society held the first meeting of its sixth session on Oct. 19; Dr. Heale, treasurer, in the chair.—The Rev. F. Howlett, F.R.A.S., delivered an introductory address, noticing many of the more important discoveries made during the past year in various departments of scientific research.

BOOKS AND PAMPHLETS RECEIVED

BRITISH.—Report of the Weather Telegraphy (E. Stanford).—Annual Report Aeronautical Society of Great Britain (Hamilton and Co.).—Journal of the Iron and Steel Institute, 1874 (Spon).—Note on the Perception of Musical Sounds: J. G. McKendrick, M.D. (Neill and Co.).—Flora Cravoniensis: John Windsor, F.R.C.S., F.L.S., &c. (Cave and Co.).—The Contrast between Crystallisation and Life: John E. Howard, F.R.S., F.L.S., &c. (Hardwicke).—Atomism: Dr. Tyndall's Theory Examined and Refuted: Rev. Prof. Watts, D.D. (Mullan, Belfast).—Brixham Cavern: N. Whitley, C.E. (Hardwicke).—Philosophy, Science, and Revelation: Rev. C. B. Gibson, M.R.I.A., &c. (Longmans).

AMERICAN.—Nomenclature of Diseases: J. M. Woodworth, M.D. (Washington).—Proceedings of the American Association for the Advancement of Science.—Notes on Ophiidiæ, &c.: F. W. Putnam.

FOREIGN.—L'Astronomie Pratique: C. André and G. Rayet (Gauthier-Villars, Paris).—Einige Bemerkungen über den Werth, welcher im Allgemeinen den Angaben in Betreff der Herkunft menschlicher Schädel aus dem ostindischen Archipel beizumessen ist: Dr. Meyer (Wien).—Über neue und ungenügend Vögel von New Guinea und den Inseln der Gelvinischen Bai: Dr. Meyer.—Manuel de la Cosmographie der Moyen Age: A. F. Mehren (Copenhagen).—Neues Handwörterbuch der Chemie: Dr. H. von Fehling (Vieweg and Son).—Die Geologie: Franz Ritter von Hauer (A. Holder, Wien).—Normale Zeiten für den Zug der Vögel: K. Fritsch (Wien).—Fossilen Bryozoen: Prof. Dr. A. E. Roon Reuss (Wien).—I precursori di Copernico nell' antichità: G. V. Schiaparelli (W. Hoepli).—Osservazioni Astronomiche e Fische: G. V. Schiaparelli (W. Hoepli).

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