

Johnson, now eighty-seven years old. His son, Chief George Johnson, bears the official title of the one of the original fifty council chiefs whom he represents. Mr. Hale described the formation of the confederation, three centuries ago, and testified to the accuracy of Mr. Morgan's history of it. He then described the "Book of Rites," which, after two centuries of verbal tradition, was reduced to writing by some one connected with the early missions. Two copies exist, and Mr. Hale is obtaining a translation of it. It is the only known American aboriginal piece of literature north of Mexico. It has many archaic words, and is engrossed, in an old-fashioned current English hand, in a common schoolboy's copybook. He also described the wampum belts of the confederation, partly preserved by the Onondagas in New York, and partly among the Indians in Canada. He told of his discovery that the Tutelos were not an Iroquois tribe, but were allied to the Dakotahs or Sioux of the West. Their first seat was in North Carolina. Brainard reported that Tutelos, Iroquois, and Delawares lived together at Shamokin, Pa., speaking three entirely different languages. The syntactical position of the personal pronoun before, after, or between any two syllables of the verb allies the Tutelo language with the two dialects of the Dahcotah, and separates it from all the other Indian dialects. But Tutelo seems to be older than the Dahcotah. So also Huron (Quebec) was older than Iroquois (Six Nations); and Delaware older than Chippeway. It looks as if the movement was from east to west, and not from west to east.

FROM an inquiry as to cetaceans which have perished on the coasts of the Mediterranean and of the West of France during the years 1878 and 1879 M. van Beneden (*Bull. de l'Acad. Roy. de Belgique*, No. 2) finds there were two species of Balænoptera on the former, *Musculus* and *Rostrata*, and two *Giphius cavirostris*, which was believed to have disappeared some years since as a living species. On the west coast of France there perished three *Balænoptera musculus*, one *Megaptera boops*, and one Ziphioid female, whose rudimentary teeth are unknown.

DR. LYON PLAYFAIR has been re-elected representative in Parliament of the Universities of Edinburgh and St. Andrews.

IN reference to the note on the Walker Prize, awarded to Dr. Leidy (*NATURE*, vol. xxi, p. 451), we should state that the sum awarded to Prof. Agassiz was, like that awarded to Dr. Leidy, 1,000 dollars.

THE sums placed at the disposal of the French Minister of Agriculture and Commerce for the purpose of encouraging research and experiments as to the best way of dealing with the phylloxera, amounted, in 1879, to 500,000 francs, and this will be increased during the present year by supplementary grants to 969,750f. Of this amount 200,000f. are devoted to the treatment of diseased vines in the districts specified by the superior commission, while 250,000f. will be given to doubling the grants voted by the various departmental and municipal bodies. Societies and companies formed for the investigation of the disease will also be assisted by bonuses to the aggregate amount of 300,000f. A further sum of 100,000f. is set aside towards encouraging the propagation of American vine stocks and the distribution of new plants and cuttings from the Agricultural School at Montpellier. Rewards to the amount of 100,000f. will be given for furthering microscopic researches, while 50,000f. are left for dealing with individual cases.

A CHICAGO agricultural journal gives an account of the largest plough ever known to be made, which has been recently turned out by an Illinois firm of agricultural machinery-makers for use on the St. Louis, Iron Mountain, and Southern Railway. It is attached to a platform car of a construction train in such a way as to cut its ditch a sufficient distance from the railway line. It will make one mile of ditch 2 feet deep and 3 feet wide, every

four hours, thus doing the work of about 1,000 men. The beam is made of swamp oak, and is 8 inches by 14 inches, the land side being made of bar iron 8 inches wide and 1½ inch thick, which had to be forged expressly for the purpose. Its total weight is 1,700 lb.

FROM China we hear that Mr. Molesworth has lately gone up the Yangtze-kiang, in order to open coal-mines in the Nganhiong province, where he hopes eventually to introduce foreign machinery.

THE additions to the Zoological Society's Gardens during the past week include a Brown Bear (*Ursus arctos*) from Asia Minor, presented by Commander Atwell Lake, R.N.; two Common Wombats (*Phascolomys wombat*) from Tasmania, presented by Dr. J. C. Cox; two Nutmeg Finches (*Munia undulata*) from India, a Chestnut-breasted Finch (*Donacola castaneo thorax*) from Queensland, presented by Mrs. Hylton Joliffe; a Himalayan Bear (*Ursus tibetanus*) from North India, deposited; an Eyra Cat (*Felis eyra*) from South America, a Short-nosed Pterameles (*Perameles obesula*), a Stanley Broadtail (*Platyercus icterotis*) from Australia, two Scaly-breasted Parrakeets (*Trichoglossus chlorolepidotus*) from New South Wales, a Blue-crowned Hanging Parrakeet (*Loriculus galgulus*) from Malacca, two Red-naped Fruit Pigeons (*Carpophaga paulina*) from Celebes, an Elate Hornbill (*Buceros elatus*) from West Africa, two Black-necked Swans (*Cygnus nigricollis*) from Antarctic America, three Wheatears (*Saxicola ananthe*), a Meadow Pipit (*Anthus pratensis*), European, five Eyed Lizards (*Lacerta ocellata*), South European, purchased; a Collared Fruit Bat (*Cynonycteris collaris*), born in the Gardens.

OUR ASTRONOMICAL COLUMN

THE SOUTHERN COMET.—There appears now to be no reasonable doubt that the comet which has attracted so much attention in the southern hemisphere is identical with the great comet which was observed in almost all parts of the habitable world in March, 1843. Dr. Gould succeeded in obtaining observations for position at Cordoba up to the evening of February 19, though the head was then only recognised "as a scarcely perceptible whiteness in the field of the large equatorial of 28½ centimetres aperture." On the following evening it was not distinguishable, though having a good ephemeris, the observers knew that it must be in the field of the telescope, which fully accounts for the comet having been unsuccessfully sought with large instruments in this hemisphere, amongst others with Mr. Common's powerful reflector at Ealing. Dr. Gould publishes the following parabolic elements founded upon his observations of February 6, 12, and 18; an orbit deduced by Mr. Hind from the Cordoba places of February 6, 9, and 14, which is annexed, will be seen to differ in no material degree from Dr. Gould's. The longitudes are for 1880°.

	GOULD		HIND	
Perihelion passage G.M.T. ...	Jan. 27	6188 ...	Jan. 27	62195
Longitude of perihelion ...	279°	52' 11" ...	279°	45' 1"
" " ascending node ...	6	10 30 ...	5	55 37
Inclination	35	20 21 ...	35	22 52
Log. perihelion distance ...	7.739364	...	7.745636	...
Motion	Retrograde	...	Retrograde	...

On comparing the accounts so far received of the appearance of the comet of 1880, while in some general features, as the great length and narrowness of the tail, &c., there is a close resemblance to the descriptions of the comet of 1843, it will be found that the head at least was probably more brilliant in the first days after perihelion in 1843, though as in the present year its brightness very quickly faded. We do not hear of the comet having been detected in broad daylight near the sun, soon after the perihelion passage as in 1843, when it was remarked only a few degrees distant from the sun's limb, at various places in the United States, in Italy and off the Cape of Good Hope; in that year the comet crossed the sun's disk without being observed in transit. In the present year the comet has not transited the sun, but according to Mr. Hind's orbit would have the following positions within the twenty-four hours after perihelion:—

Greenwich mean time.	Right Ascension.	North Polar distance.	Distance from Sun's centre in R.A.	Distance from Sun's centre in N.P.D.
January 27, 22 ...	309 49 ...	109 33 ...	- 0 32 ...	+ 1 15
28, 0 ...	310 1 ...	109 49 ...	- 0 25 ...	+ 1 32
28, 2 ...	310 13 ...	110 4 ...	- 0 17 ...	+ 1 48
28, 4 ...	310 26 ...	110 18 ...	- 0 10 ...	+ 2 4

The following expressions for the comet's heliocentric coordinates to be combined with the X, Y, Z of the *Nautical Almanac*, apply to the same orbit, and may be useful to some of our readers in the other hemisphere who have occasion to learn the right ascension and declination of the nucleus in examining their observations of the track of the tail before the head was visible:—

$$x = r [9.99922] \sin (\nu + 83^{\circ} 39' 7'')$$

$$y = r [9.99079] \sin (\nu + 279^{\circ} 22' 6'')$$

$$z = r [9.32714] \sin (\nu + 82^{\circ} 39' 9'')$$

r is the radius-vector and ν the true anomaly.

A NEW COMET.—A telegram to the Astronomer-Royal notifies the discovery of a comet at Ann Arbor, Michigan, on April 6, at 11h. Washington time, in right ascension 7h. 20m., and declination $84^{\circ} 25'$; daily motion in right ascension, $-30m.$; in declination, $-48'$; tail, $3'$. From a telegram to the Academy of Sciences at Vienna, the name of the discoverer would appear to be Schäberle.

GEOGRAPHICAL NOTES

THE gold medals of the Royal Geographical Society have just been awarded as follows:—1. To Lieut. A. Louis Palander, of the Swedish Royal Navy, in recognition of the services he has rendered to geographical science as commander of the *Vega* in the Swedish Arctic expedition under Prof. Nordenskjöld, during which he safely navigated the ship along the unsurveyed shores of the Asiatic continent for nearly 3,000 miles, and took the leading part in charting the coasts of Northern Asia. 2. To Mr. Ernest Giles for leading four great expeditions and several minor ones in Australia, and for his route-surveys, geological and botanical collections, and published descriptions of his various journeys. A gold testimonial watch was voted to Bishop Samuel Crowther for his services to geography in the Niger region during the past forty years, and for having aided various expeditions on that river between 1841 and 1857. Prof. Nordenskjöld, having received a gold medal in 1869, was, we believe, in accordance with all precedents, ineligible for another, but, as we have already recorded, he has been elected an honorary corresponding member—an honour accorded to Mr. H. M. Stanley under analogous circumstances. The Council of the Society of Arts at their last meeting elected Prof. Nordenskjöld an honorary life member of the Society in consideration of the services rendered to science by his recent explorations.

MOUNT NAIGUATÁ, in the Venezuelan coast-chain near Carácas, and at a short distance towards the east from the Silla, was ascended by a party from Carácas, August 24 last year. Its height was for the first time carefully determined by Lic. A. Avelledo and Dr. Man. V. Diaz. The barometrical reading on the top was 551.20 mm. (reduced to freezing point), thermometer being at $13^{\circ} C.$ At the same time observations made in Carácas (Colegio de Santa Maria) gave: Barom. 683.44 mm.; therm. $24^{\circ} 8'$, which makes Naiguatá 1,852 metres higher than the lower station, and as this place is 930 metres over sea-level, the total height of Naiguatá is 2,782 metres, or 9,130 Eng. feet. Dr. A. Ernst made botanical and other collections. The rock, wherever it is not covered by vegetation, is amphibolic gneiss, with much quartz, and therefore very hard. A swift (*Chaturva sonalis*, Sclat.) was frequent on the top, but it could not be discovered whether it was nesting there. In the stomach of one specimen a large number of wasps were found. Of beetles there were some *Platymus*, a *Pterostichus*, and a few *Chrysomelidae*, crowded together with some wasps in a narrow cleft between two large stones. Not very far from the top a specimen of what appears to be the moss insect described by Belt ("Naturalist in Nicaragua," p. 382) was caught, clinging to the bark of a stem, which was thickly covered with *Neckera undulata*, Hedw., the likeness between the insect and the branches of the moss being indeed very striking. No butterfly was seen, though there was an abundance of flowering plants; nor were there any land-shells, which was to be expected, on account of the total absence of limestone. Amongst notable

plants growing on the higher part of the mountain the following may be mentioned:—*Arenaria nemorosa*, H.B.K., *Acana*, sp. n. (allied to *A. cylindrostachya*, Cav., and *A. macrorhiza*, Hook.), *Berberis aurahuacensis*, Ch. Lem. (after Sir J. D. Hooker; the plate in Van Houtte's, "Flore des Serres," iv. tab. 334, however, does not agree; it looks very much like *B. guilache*, Tr. et Pl.), *Liabum hastifolium*, Poepp., *Hieracium avile*, H.B.K., *Gnaphalium incanum*, H.B.K., *Myrsine ciliata*, H.B.K. (the only woody plant which reaches the top), *Sphacele*, sp. n., *Siphocampylus microstoma*, Hook., *Anthericum coarctatum*, R. et P., *Arthrostylidium longiflorum*, Munro, *Epidenrum alpicolum*, Reichb. (several specimens were seen with racemes ten to twelve inches long, and sending forth a sweet vanilla-like smell). It must be remembered that Mount Naiguatá was ascended some years ago by the late Mr. James Mudie Spence, of Manchester, and his party.

WE take the following from the *Times of India*:—It is said that Major Biddulph, stationed on the Kashmir boundary, has prepared a report upon the customs, the languages, and the folklore of the singular communities among whom he has been residing for a long time. "From Major Biddulph's peculiar advantages and opportunities may be expected," says the *Pioneer*, "a complete account of people who are a survival of the old Aryans, from whom all civilised mankind of the present day is probably descended. Surgeon-Major Bellew, meanwhile, has been examining a few men from the cantons on the south-west of Dardistan, peopled by a similar race, who in one respect are still more interesting, for their country has never yet been visited by a civilised traveller. But in appearance and language they closely resemble the Dards, and, unlike them, have not embraced the creed of their Mahomedan neighbours. The tongues spoken in all these hills are, for the most part, Aryan; not descended from Sanskrit, and, indeed, of earlier origin than that classical language. On the northern slopes of the mountains Parsee words prevail in the southern cantons. Some of the words resemble Greek, some Latin, some those of modern Europe. They make, and freely consume, grape wine, something like a crude Burgundy. Those who are not Mussulmans believe in one God, but employ the intercession of minor powers, represented by images. They also occasionally canonise great men whom they have lost by death. They are usually monogamous, opposed to divorce, and strict defenders of the chastity of their unmarried girls. These latter have blue, grey, or hazel eyes; black hair is the exception amongst them, and, when young, they are of such remarkable comeliness as to be in great demand in the slave markets of adjacent countries. Authentic information concerning these interesting races cannot but be anxiously awaited by all who realise the nature of the questions involved."

THE Rev. C. T. Wilson, of the Church Missionary Society's Nyanza Expedition, who has just arrived in England *via* Egypt, from Lake Victoria, will read a paper on "Uganda and its People," at the meeting of the Royal Geographical Society on Monday next. Great interest will attach to this meeting, owing to the expected presence at it of the three Waganda chiefs who have accompanied Mr. Wilson as a deputation from King Mtesa.

FURTHER details are to hand as to the projected Italian Antarctic Expedition, under Lieut. Bove and Commendatore Negri. Committees for subscriptions have been started in the chief Italian towns and the colonies, and it is hoped the expedition will be ready to sail in May, 1881. From the Shetlands the expedition will steer to the south-west, and endeavour to penetrate a line of land which was observed by Dallman, a Hamburg whaler, some few years since. Thence a movement will be made towards the land where Bellinghausen marked the lofty capes of Alexander and Peter, and the western lands observed by Wilkes in 1839. At this point a serious discussion must arise as to future movements. It would be desirable to coast along the land of Bellinghausen if there were any appearance of a "continued mass," steam for the back of the islands which Wilkes believed to exist, and thus enter on the south of Ross's Sea, where the winter might be spent. Should, however, expectation be disappointed, the winter might be passed on the Bellinghausen land, and preparations might be made for entering Ross's Sea. The voyagers think that with a strong vessel it would not be impossible to penetrate beyond Ross's Sea, and complete the studies which were made of the flora, the fauna, and the mineralogy of the Antarctic region. Having examined these lands and seas, it is proposed to move towards Adele, discovered by D'Urville in 1840, and here it is thought it might be