

cases where the milk used was from cows the health of which had undergone some deterioration from the diet referred to.

[J. L. HAMILTON, M.D., Peoria, Ill.]

Since our dairies have been removed to the country, and the cows fed on other food, and some slop still used, the effect of the still-slop is not noticed. Of course, there are other things as well as the slop. When cows are kept up in barns, and fed only on still-slop, the air they breathe is very impure, and they will drink but little water and have no exercise. This contributes to the unhealthiness of dairy milk.

[C. A. ROHILLARD, M.D.]

Knowing that this matter is extensively used in some parts for fattening purposes, and that healthy beef is brought to the market as a result of this mode of feeding, I would incline to the belief that the milk from cows so fed is all right. I am not prepared, however, to state positively that it should be so under all circumstances.

[JAMES E. REEVES, M.D., Wheeling, W. Va., formerly secretary state board of health.]

My observation, from the stand-point of the general practitioner of medicine, fully warrants the belief that the milk of town-fed cows — feeding on slops, garbage, and brewery refuse — is dangerous to the public health.

[HENRY D. HOLTON, M.D., Brattleborough, Vt.]

Here in Vermont we do not have any thing of the kind; yet we are well aware that the food of the cow has much to do with the quality of the milk and butter. In summer, dairymen know from experience and observation that there is a great difference in the pastures. When cows are in some pastures, the milk, and especially the butter, is much better than when in others. Many people can tell butter made when the cows are fed on cottonseed-meal instead of corn-meal. It is also true that the milk of cows who are worried or frightened will sour much quicker than when not so worried. Infants fed with the milk of cows worried or heated by running (as is sometimes done by boys in bringing them from the pasture) will suffer from colic, and often from diarrhoea. There is no doubt in my mind that swill from distilleries would produce a very poor quality of milk.

[D. L. PHARES, M.D., member of state board of health, Agricultural college P.O., Miss.]

That it is unwholesome. In small quantity, combined with plenty of good, sound normal cow-food, it may do no serious injury; but in any considerable quantity it is, in my opinion, unwholesome. The nature and condition of the substance

seem to me to justify this opinion. True, it may for a time seem to improve the condition of the cow, but even then the physiologist and pathologist can detect evidences of damage.

[G. A. LIEBIG, Baltimore, Md.]

I would unhesitatingly prefer other than milk from cows so fed, not only for the reason of character of food, but also for the manner of treatment of the animals, — housing, etc.

[R. HARVEY REED, secretary Ohio state board of health.]

I think distillery swill is very objectionable food.

[L. M. KENYON, M.D., Buffalo, N.Y.]

I think, from what I have read from time to time, and know from what little I have seen, that it is most decidedly detrimental, although I can now give no detail, or specially individual cases.

[J. F. KENNEDY, M.D., secretary Iowa state board of health, Des Moines, Io.]

Upon general principles, I should consider such food as injurious to the cows, and hence productive of milk injurious to those using it, especially to children largely dependent upon it.

[F. N. BOKER, sanitary engineer, Montreal, Can.]

Decidedly unwholesome. It soon acquires a rotten flavor, and is deceptive as to nourishment. During our long Canadian winter in Montreal, a good deal of swill is given to milch-cows to increase the flow of milk; and, as the mortality among young children is very great in this city, I attribute it to the poor quality of the milk, etc.

[To be continued.]

EXPLORATION AND TRAVEL.

Lieutenant Wissmann's expedition.

IN *Science* of April 22 we referred to Lieutenant Wissmann's trip from Luluaburg to the Lubilash. A letter from Wissmann which was published in the *Verhandlungen der Gesellschaft für Erdkunde*, April, 1887, contains the following interesting details. He ascended the Lulua as far as Katende (the situation of which may be seen on our map of Central Africa). Here he visited the grand Lulumba Falls, which are the termination of the navigable part of the Lulua. He had some difficulty in crossing the river, on account of the hostility of the natives. He proceeded eastward, and, after crossing the river Moio on a bridge, reached Tenda-Mota. Here is the boundary between the Bashilange and Bagna-Kalosh, who belong to the Baluba. The Kalosh and their eastern neighbors live in small villages of from four to ten houses, which are surrounded by fields in which they

grow sweet-potatoes, hirse, and manioc of a poor quality. There is scarcely any uncultivated land, one field adjoining the other, and one village being close to the other. Wherever a patch of uncultivated land exists, it is prairie, with scattered shrubs three feet in height. The land is not very fertile, and does not yield large crops. On the steep knolls which form the watersheds there are a few large trees. The banks of brooks and rivers are barren, and in some places the hills and plains are covered with granite boulders. Very few bananas are grown in the villages. The men are very tall, and have heavy bones. They wear head-dresses made of feathers, and have their hair arranged in a thick knot on the back part of the head, and in numerous small knots in front. Their spears are generally made of hard wood: they always carry a club, and use the broad knife of the Lunda. Wissmann considers them one of the finest-looking peoples of Central Africa.

It was impossible to buy any thing, as the population was too dense. Small-pox is endemic. On the Buchimayi, a western tributary of the Lubilash, the natives attacked the caravan, and Wissmann was compelled to return to Luluaburg. In October, 1886, he started on his journey to the unknown district between the Sankuru and the upper Kongo. He writes that the natives informed him of the existence of lakes similar to Lake Mantumba and Lake Leopold in this region. It is worth remarking, that, according to Dr. Wolf's observations, the Sankuru has no tributaries on its right bank. There are only a few small brooks, which have black water. This shows that they come from a swampy region. The Busera, Juapa, and Lubilash, on the other hand, which come from the same region, have water of a light yellowish color. Wissmann intends to explore this watershed, and to reach the Kongo near Nyangwe.

In regard to the Bashilange and Bateke tribes, Wissmann says that probably Baluba, who emigrated from the upper Lubilash, intermarried with a people similar to the dwarfish Watwa. Of these, the Bashilange and Bateke are the descendants. In their districts no tribe of dwarfish stature exists, while they may be found among the Bakuba, Basonge, Wanyema, and Baluba. The Baluba occupy the whole territory as far east as the Tanganyika, Lukuga, and Lake Meru. The King of Lunda, the Muata Yamvo, is of Baluba descent. The remarks on the anthropological features of the Bashilange agree with the views of R. Virchow, expressed some months ago (*Verh. der anthrop. Ges.*, Berlin, 1886), when discussing the valuable anthropological measurements and the skulls collected by Dr. Wolf on his memorable journeys in

Central Africa. Virchow says that the anthropological features of these tribes are those of a mixed race, the negro type prevailing. He does not express an opinion as to the second element. His conclusions are supported and completed by Wissmann's ethnological observations on the non-existence of a dwarfish population in the territories inhabited by the Bashilange.

Asia.

General Ignatief, governor of eastern Siberia, has proposed the exploration of part of the frontiers between Russia and China. A large expedition is being equipped, which is to visit the Safansky Mountains and the Kossogol west of Irkutsk. Colonel Bobyz is the leader of the expedition, which will last from five to six months (*Gaz. géogr.*, May 19).

The Imperial geographical society of St. Petersburg proposes to study the periodical changes and the gradual desiccation of the lakes of western Siberia. The plan of the work is designed by Potanin, Yadrutzef, and other Russian explorers of northern Asia, the president of the committee being Mr. Stebnitzky.

Mr. B. C. Henry has made a second visit to the Island of Haiman. He visited the aborigines of the mountain region, reaching the geographical centre of the Lee territory, and demonstrating the fact that this region, supposed to be impassable, can be traversed from east to west and from north to south with comparative ease (*Proc. Roy. geogr. soc.*, June).

Africa.

A Reuter's telegram from S. Paul de Loanda, dated May 26 (*Scottish geogr. mag.*, June), announces the arrival of Mr. Stanley's expedition at Leopoldville on April 20, all well, and the departure of the main body nine days later.

Le mouvement géographique publishes a brief description of the exploration of the river Inkissi, which empties into the Kongo near Stanley Pool, coming from the south. The explorer, Lieutenant Hakansson, started on his expedition on the 6th of November. For three days he passed through a barren desert, but then the country became more fertile and settled. This observation is of some importance on account of the disputed extent of the barren district on the west coast of Africa. From all observations, it appears that the region of the lower Kongo, though generally very dry and barren, contains numerous patches of fertile land. The population of the Inkissi consists mainly of Bakongo.

Mr. J. T. Last, who has followed up the work of Mr. O'Neill by exploring the Namuli Hills and the Lukugu valley, has arrived at Zanzibar. He

has carried out the programme of his journey, though he found the summit of the Namuli Hills inaccessible, and in addition traversed the whole region a second time, striking into the interior from Kwilimane, and emerging at Ibo on the Mozambique coast (*Proc. Roy. geogr. soc.*, June).

America.

Under the auspices of the Italian geographical society, Count Ermanno Stradelli from Piacenza, who has travelled for many years on the Amazon and its tributaries, is going to explore the head waters of the Orinoco, which were visited in the beginning of this year by Chaffanjon (*Boll. Soc. geogr. Ital.*, May).

Prof. Dr. R. A. Philippi writes to *Petermann's Mittheilungen* that the Chilean government has sent out two expeditions to survey the boundary between Chili and the Argentine Republic from Rio Palena to the pass of Villarica. It appears that the Cordillera is situated in Chilean territory, while the watershed between the Atlantic and Pacific oceans, which forms the boundary, lies east of the mountains, about 1,600 feet high. One of the expeditions will cross the Ranco pass east of Valdivia, and return by the pass of Villarica. The time allowed to the expedition is from two to two and a half months.

HEALTH MATTERS.

YELLOW-FEVER AT KEY WEST. — The existence of yellow-fever at Key West is officially recognized and declared epidemic by its board of health. In a proclamation issued by that body, it is stated that an effort is being made to conceal cases, and to resist the health officers. The board announces that a bulletin will each day at noon give the status of the epidemic, naming new cases, deaths, and recoveries. Reports are required from every householder of any sickness which may occur in his family. Unacclimated persons are required to remove from the infected district, and are advised to leave the island. Proprietors of saloons are especially called upon to refuse drinks to those inclined to abuse the use of the same, since such persons taken with fever are nearly hopeless cases, and their deaths add to the mortality list, and tend to increase mortality among others.

PLEURO-PNEUMONIA IN WESTCHESTER. — There has been an extensive outbreak of contagious pleuro-pneumonia among the cattle near Golden's Bridge, Westchester county, N.Y. In one of the affected herds there are two hundred and sixty head of cattle. In addition to this, several smaller herds are affected. The cattle have been appraised under the direction of the U. S. bureau

of animal industry, of which Dr. D. E. Salmon is chief, and are being slaughtered. It is the hope of Dr. Salmon to eradicate the disease from the county.

NOTES AND NEWS.

AN *Archiv für Geschichte der Philosophie* will shortly appear in Berlin. The editor-in-chief is to be Prof. Ludwig Stein of Zurich.

— The *Athenaeum* announces that the well-known Swedish botanist, Prof. Johan Edvard Areschoug, died at Stockholm on the 7th of May. He was born in 1811, and worked under Agardh and Fries at Lund. He was made reader in botany at that university in 1839, and in 1858 was appointed to succeed Elias Fries as professor of botany at the University of Upsala. Among his numerous publications, those best known are his 'Symbolae algarum florum Scandinaviae,' his 'Iconographia phycologia,' and his 'Phyceae marinae.' Areschoug retired from his chair in 1876. On the same day the Swedish statistical writer, Dr. Fredrik Theodor Berg, died in Stockholm, in his eighty-first year.

— Messrs. John Wiley & Sons, New York, have issued an admirable catalogue of their publications, which cover every department of the mathematical sciences and of engineering.

— The second number in the series of monographs on political economy and public law, edited by Prof. Edmund J. James, and published by the University of Pennsylvania, will shortly appear. It treats of the anti-rent riots in New York, 1839-46, an important but hitherto almost entirely neglected chapter in American economic history. The author, Mr. E. P. Cheyney, instructor of history in the University of Pennsylvania, finds the source of the difficulties, which in many respects resemble the present Irish land-troubles, in the peculiar land-tenures of early New York. A vivid description is given of the rise and progress of the riots, and a full account of the numerous and important changes in the constitution and laws of the state, which followed as a result of this movement.

— On Friday, May 13, the Hon. Ion Grant Neville Keith-Falconer died at Aden, and with him one of England's most promising scholars passed away. Mr. Keith-Falconer was born in 1856, and graduated at Trinity college, Cambridge, in 1878, attaining high honors in Semitic languages. After a period of study in Germany and the east, he became Hebrew lecturer at Clare college; and on the resignation of Professor Robertson Smith in June, 1886, he was appointed