

# THE "SLEEPING SICKNESS" THE CURSE OF UGANDA

### Recent Investigation Seems to Show That It Is Occasioned by a Parasite Called "Trypanosoma, Which Is Carried by a Tsetse Fly and Deposited in the System by Its Bite.



COLONEL DAVID BRUCE. Who has discovered the cause of sleeping sickness.

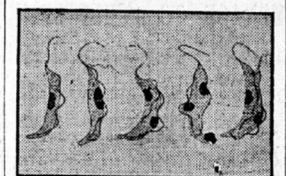


MRS. BRUCE. Who helped her husband to discover the cause of sleeping sickness.

London Sphere. A quarter of a century ago Colonel Lewis of the Indian medical service was examining the blood of some rats caught in Calcutta. He was astonished to see a wormlike microbe dashing about at an extraordinary rate and causing everywhere a violent commotion by the lashing of a whip which it possessed at its anterior end. The rat, strange to say, appeared to treat its unruly guest with indifference. This parasite, which has also been found in one out of every four London sewer rats, was called, from its boring motion, trypanosoma. So

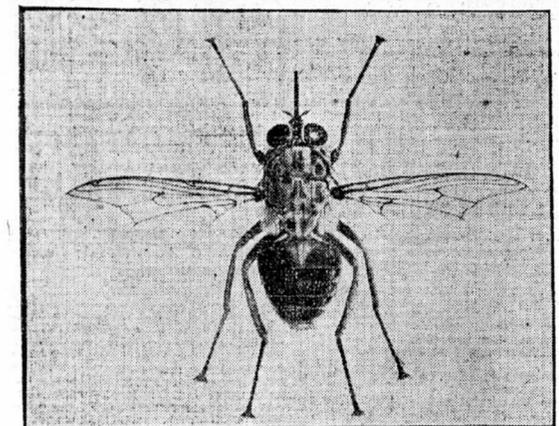
could by its bite infect healthy animals, in whose blood the trypanosoma invariably made its appearance. The next question was—where does the fly get this microbe? For years all explorers and natives had noted that the fly was in some way connected with big game; where the koodoo, impala, and buffalo fell before the gun of the hunter the fly and with it the nagana disappeared. This enigma was solved by Bruce, who found that the fresh blood of the wild beasts and the koodoo sets up nagana in healthy animals. To complete the study of the

gained such a foothold that the Royal society sent out an expedition for the study of it. Inquiry was made over the remarkable fact that the area affected was a belt not wider than ten miles and especially on the Busoga and Kavirondo shores of Lake Victoria. In the islands the mortality had been terrible. A laboratory was established at Entebbe and study was begun. The task, however, was difficult and seemed no nearer solution when Colonel Bruce of nagana fame was dispatched to investigate and elucidate the problem. On his arrival Dr. Castellani announced the discovery of a trypanosoma, the nervous system of affected negroes, and the significance was at once perceived by Colonel Bruce. With his wife, who had also accompanied him to Zululand, he at once began the investigation of sleeping sickness and within a few months had solved the problem. The trypanosoma of Castellani was found in every case of the disease; it was not found in people not suffering from the disease. It was present in the blood; only a blood-sucker could put it there. Could it be a fly disease like nagana? Examination soon revealed the fly—a tsetse fly—differing slightly from the old tsetse of Zululand. Natives were instructed to collect the flies, which soon began to arrive in packets by the hundred from the islands. The geographical distribution of the fly corresponds absolutely to that of the disease. The fly is made to bite monkeys; the monkey contracts the disease and passes into a sleeping state. The importance of these researches can scarcely be overestimated; we may still be a long way off the cure, but the cause is known. The harm-



THE CAUSE OF SLEEPING SICKNESS. The parasite called the "trypanosoma" is carried by the tsetse fly and deposited in the sufferers.

less parasite of the rat has led to the discovery of a more deadly one, having been shown to be the most deadly of all microbes which infect man and animals. Science may yet rid Uganda—perhaps the best of all our African possessions—of the curse which affects its inhabitants.



THE FATAL FLY (GLOSSINA PALPALIS) WHICH CARRIES THE PARASITE. These pictures of the fly and the bacillus are reproduced by permission from the specimens in the South African Museum.

strange was its appearance that many eyes were turned to microscopes, and a veterinary surgeon in India soon discovered that it was not always harmless, as one of its brethren was constantly found in the fatal surra disease of horses in India. Long after this Colonel David Bruce of the R. A. M. C. happened to be stationed in Zululand and was soon impressed with the fatally among domestic animals of the nagana or tsetse fly disease. Already the terrific effects of the deadly tsetse fly had been described in graphic language by Livingstone, Selous and all the pioneers of exploration in the dark continent. To their bitter experience it was known that to take a horse into the fly country was death. For days the traveler might push his way thru tropical forests to emerge at last on an oasis by a stream. In a few minutes, by the kicking of the horses and the language of the native drivers, he knew he was in a fly belt, for before anything could be done the fly had flopped down on animal and man and was making his lunch off living blood. The deadly brute was the terror of man and beast; the latter it killed, the former was checked for want of transport. At one time the fly seemed to be more or less limited to southeast Africa along the Zambesi, where the heroic Livingstone was constantly pestered by it. With the opening of the continent it has, however, been found in many places along the shores of the great lakes, on the west coast, and even on the borders of the desert around Lake Chad. The greatest obstacle to the white man's conquest of Africa has been the tsetse fly. In Zululand Colonel Bruce soon found, contrary to belief, that it was not the actual bite of the fly that is poisonous, but that the fly deposits in one animal a trypanosoma which he has sucked from the blood of another. The fly is merely a go-between, and it is the trypanosoma which carries death to all it enters. By a series of brilliant and convincing experiments Colonel Bruce showed that the fly caught in the fly country and brought to a healthy neighborhood

disease a dog with nagana was shipped to England, arriving in London in 1898. This animal was the starting point of many experiments which have shown that with the exception of man no animal survives an invasion by the trypanosoma of Bruce. The big field opened up by these researches soon yielded a harvest of results in other parts of the world. In the vast area of the Gran Chaco, where the pampas of Argentina, Bolivia, Paraguay and Brazil meet, the trypanosoma of Mal de Cadaras has swept tens of thousands of horses off the face of the earth, and in many regions the bandy-legged Gaucho becoms the loss of his horse, whose place has been taken by the humble but immune ox. The trypanosoma of Dourine is also universally fatal to horses. Until recently man seemed to rest secure. Only a year ago, however, the captain of a government boat on the Gambia sickened, and in his blood was found a trypanosoma—with the usual result. About the same time alarming reports had come from Uganda of the deadly Congo sleeping disease of negroes. This extraordinary condition, known on the west coast of the Congo, had just made its appearance in the protectorate. The malady was a mystery, altho three cases from the Congo had been sent



EXAMINING A PATIENT SUFFERING FROM SLEEPING SICKNESS. Drs. Brumpt and Trautmann puncturing the spinal column in which the trypanosoma exists.

home to London for study. The negro, when not at work or eating, is usually in the arms of Morpheus even when healthy, but the keen observer sees something more than Morpheus in the sleeping disease of the Congo. The native is frightened because he has seen his friend die; he has seen his village decimated and he now knows that from the sleep there is no awakening. The sleep is at first inauspicious and is often put down to laziness, but the face becomes dull and bloated and the nigger, once happy and without a care, is soon a changed man. He no longer goes out, but lies sleeping in his hut and can scarcely be aroused for his food. He may fall asleep during his meal, by degrees waste to a skeleton, and within eight months is a dead man. No case has recovered. Already in 1901 this fearful malady had made rapid strides in Uganda, along the northern and eastern shores of the Victoria Nyanza and in its islands. Its origin is involved in obscurity, but it is believed to have arrived in the wake of Emin's followers after their relief by Stanley at Wadai. In any case, by 1904 the disease had

### NORTHWESTERN SANGERFEST Five Hundred Singers Expected at the Biennial Festival at Grand Forks.

GRAND FORKS, N. D.—The seventh biennial festival of the Northwestern Scandinavian Singers' association will be held in this city July 7, 8 and 9. L. K. Hassell of this city is president and numerous companies have been at work several weeks on the preliminary arrangements. While the matter has not been fully decided, it is likely that one concert will be given at the Chautauque grounds at Devils Lake, and one at the opera house. The orchestra of Duluth has been engaged to play up to the program. It is hoped to secure Mrs. Bjorn Bjornson, the foremost school of Norway, but on account of illness these attempts have failed. It is hoped to secure two artists of national reputation. It is expected that at least 500 singers will take part and that they will be accompanied to Grand Forks by many lines of music.

The second annual interscholastic field meet will be held at the University of North Dakota May 14. The contest to be open to students of all high schools, normal schools, academies or other educational institutions in the state. The meet will be in charge of R. B. Kennedy, physical director at the university. The events will be: 100-yard run, 220-yard run, 440-yard run, 50-yard run, one-mile run, 120-yard hurdle, 10 hurdles, 2 feet 6 inches each; 220-yard hurdle race, 10 hurdles, 2 feet 6 inches each; running high jump, running broad jump, pole vault for height, putting twelve-pound shot, throwing twelve-pound hammer, half-mile relay race, six to enter, four men per team, each 220 yards; hand-some gold, silver and bronze medals will be awarded to the first, second and third places in each event.

At a ceremonial session of Grand Forks lodge, No. 285, B. P. O. E., the following officers were elected: Exalted ruler, W. B. Wood; esteemed lodge knight, F. W. Schlager; esteemed loyal knight, J. A. Gannett; esteemed lecturing knight, C. J. Plisk; secretary, Frank A. Brown; treasurer, James A. Blundie; trustee, Frank L. Dickey; grand representative, E. Y. Saries; alternate, Judge C. J. Plisk. Thirty members of Fargo lodge and large representations from Crookston, Larimore and other cities attended the meeting.

LISBON, N. D.—The inspection of Battery A and the First regiment band took place here. Both organizations, especially the band, were highly complimented by Colonel Peake. The band gave a fine concert, which was followed by a dance by the Old Soldiers' home. The raising funds for an Old Fellows' home.

### COLONY OF PRESBYTERIANS Advance Guard of Many Families Occupying Land in Polk County.

CROOKSTON, MINN.—A plan has been made by an enterprising firm of real estate dealers in this city that will result in colonizing Presbyterian church adherents on lands in western Polk county. It is a colonization scheme that has progressed until it is an assured success and many of those who have entered into it are already on the ground. Several months ago a Crookston land man was in Iowa and interested Rev. Chalmers Peterson of Emerson in Red river valley lands. A plan was worked out to secure the co-operation of a dozen families have arrived and taken possession of the lands bought for them. The building for night will see a large addition to the already existing. The land is purchased and ready for occupancy. The newcomers will establish a creamery, store and other conveniences, a telephone system will be installed and a school community will result from the progressive efforts of the Crookston real estate firm.

### Locations for Business If you are seeking a location for any mercantile business, for the practice of a profession, or for the manufacture of any article, first communicate with the undersigned, who will inform you in regard to opportunities of the line of the Chicago, Great Western & Railway company, the most progressive railway traversing the most fertile section of the United States. Maps and Maplets sent on request. For specific information given as requested, W. J. Reed, industrial agent, 215 Endicott building, St. Paul, Minn.

The cost of taking the first census was a little over 1 cent a head; that of the last census 17 cents.

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Every price quoted is an extraordinary reduction. You must come Tuesday if you would share in the savings.

## And in addition Double Amount S. & H. Green Trading Stamps.

### Wash Goods...

Extra specials for Tuesday only. Quantity limited, none to dealers.  
Checked Apron Gingham in blue and white checks only. A 7c value... special Tuesday only, yard... 3 1/2c  
300 Pieces Best Prints, royal blue ground only... and Striped Dress Gingham. Values 7c and 8c. Extra special Tuesday only, yard... 3 1/2c  
200 Pieces Fine Zephyr Dress Gingham in stripes and plaids. Regular 12c goods... extra special Tuesday only, yard... 7 1/2c

### Kitchenware Specials...

Basement... First Avenue.  
Blue Enamelled Tea Kettles—Imperial, white lined. Size 7, 8, 9—Regular 89c, 98c, \$1.19—Extra special Tuesday 60c each.  
Nickel Plated Tea and Coffee Pots—Copper bottom. Regular 85c, 89c, 49c, 59c 2-pint. 3-pint. 4-pint. 5-pint. Tuesday... 25c 30c 40c 50c  
Family Food Choppers—Either "Enterprise" or "Gem"—Regular \$1.25... Special Tuesday, each... 95c

### Silks, Dress Goods Linings...

Quantities limited.  
Popular fabrics at remarkably low prices Tuesday only.  
Black Mohair... 38-inch Black Mohair Brilliantine, fine, bright, strong and lustrous... Our unequalled 29c quality... special Tuesday only, at yard... 21c  
Cream Mohair... 37-inch Cream English Mohair Brilliantine, strong, firm and bright. Tuesday extra special at, yard... 30c  
Black Silk Peau de Soie... 10 pieces 86-inch Black all silk Peau de Soie, heavy, strong, silky, and wear guaranteed. Our \$1.39 quality... special Tuesday only, at yard... 98c  
Lining Remnants... Black Percealine Mill Remnants, from 1 to 5 yard lengths, of regular 12c qualities. Tuesday extra special at, yard... 6c

### Pictures at Half Price...

Picture stock must be reduced at once. Your choice of any picture in stock... nothing reserved... JUST HALF PRICE Tuesday at...

### Go-Carts and Baby Carriages...

Extra Special Discount Tuesday  
20% off ON ALL GO-CARTS AND BABY CARRIAGES TUESDAY ONLY.

### Carpet Dept. Specials...

Third Floor... 5th Street.  
Smyrna Rugs... reversible, rich Oriental patterns, size 9x12 feet, \$15 value... Tuesday... \$9.98  
6x9 foot, \$7.50 value... Tuesday \$4.98  
Stair Carpet, heavy and durable, good value at 20c... your choice of 3 patterns, yard... 11c

### Clearance Sale Lace Curtains...

Third Floor... First Avenue.  
Recently we received direct from the largest factory in America, several cases amounting to thousands of pieces, of half pair Lace Curtains, consisting of Arabian Laces, Cable Nets, Scotch Laces and Nottingham Curtains; also a large shipment of salesman's samples and manufacturer seconds.  
We have held two very successful sales of these goods, but the amount was so immense that we still have a large quantity on hand. To make an immediate and final clearance, Tuesday we offer the entire lot at prices that will sell every piece.  
Lot 1... 100 half pairs Arabians, perfect goods, worth up to \$5.00 per pair. If you have an odd window where you can use a half pair here 98c is a bargain, each...  
Lot 2... About 200 pieces Nottingham Laces—These are manufacturers' seconds, slightly imperfect, offered in three grades:  
Grade 1... Laces worth regularly up to \$1.35 a pair, each... 24c  
Grade 2... Laces worth up to \$2.75 a pair, each... 44c  
Grade 3... Laces worth regularly up to \$4.50 a pair, each... 74c  
Lot 3... 400 salesman's samples about a yard and a half long, full width. These are samples of goods worth up to \$4.00 a pair. Your choice, each... 19c

# Second Annual Silverware Sale...

This Week One year ago we inaugurated these annual sales of fine silverware. The extremely low prices quoted for this sale are due to several conditions. In some instances the lots are clearances, but are mostly manufacturers' surplus lots

bought far below wholesale prices. We offer them at about one-third to one-half regular retail prices. Many at less than cost to manufacture.

These goods are not odds or ends, or damaged in any way, but first quality high-grade bright new silverware, in last season's handsomest patterns, direct from the factories. This is your one opportunity to attain Easter gifts, wedding presents, or articles for personal use at home, at prices never so low in the Twin Cities.

- Lot 1 Consisting of Riceszinn Steins, Candelabra, Vases, Chocolate Pots, Pitchers and Ice Tubs—worth up to \$10.00...at this sale, choice at \$3.00.
- Lot 2 Consisting of Riceszinn Steins and Ale Mugs in assorted patterns and sizes, worth \$2.50 to \$3.50...Choice at this sale \$1.50.
- Lot 3 In this lot are Bread Trays, Crumb Scrapers, Cake Baskets, Butter Dishes, worth \$2.50 to \$3.50...at this sale, choice \$1.98.
- Lot 4 Quadruple plated Syrup Pitchers, Serving Trays, Butter Dishes. Worth \$2.50 to \$2.75... Annual sale price, choice \$1.48.
- Lot 5 A large group of quadruple plated 2-piece Tea Sets, in a choice assortment of patterns. Worth \$3.50 to \$5.00 a set...Choice at this sale \$2.50.
- Lot 6 Such as Baking Dishes, Fruit Dishes, Crumb Trays and Ice Tubs, all quadruple plated. Worth \$4.00 to \$5.00... in this sale at, choice \$2.98.
- Lot 7 This lot consists entirely of fine 3-piece Tea Sets, that are splendid values at \$7.50 a set... Choice at this sale for \$4.50.
- Lot 8 Beautiful 4-piece Tea Sets—quadruple plated, either bright burnished or satin finish. \$8.50 is a fair price for these. At this sale, choice for \$5.50.
- Lot 9 4-piece Tea Sets; tea pot, creamer, sugar and spoon holder, quadruple plated, ranging in values from \$15.00 to \$17.50 a set. This sale, choice, \$9.75.
- Lot 10 Consists of 3 and 5-light Candelabras that are worth from \$7.50 to \$10 each. Special at this sale only, choice \$5.00.
- Lot 11 Sugar Bowls, Cracker Jars, Pickle Castors, Butter Dishes, Bread Trays, Spoon Trays, Nut Bowls, Syrup Pitchers, worth \$1.50 to \$2.00 each. Choice at this sale \$1.00.

Rogers' Nickel Silver Tea Spoons 6 for 25c.  
Rogers' A-1 quality silver plated Tea Spoons in plain and fancy patterns, 6 for 39c.  
Rogers' Nickel Silver Table Spoons, at sale price, 6 for 45c.  
Rogers' 12 dwt. Knives or Forks, special, set of 6 pieces, \$1.25.

## Some People and Coffee don't agree.

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