

Cold season.

+ 24° to 25° C. during day.

+ 6° to 10° C. during night.

May, June, July.

In the hot season the thermometer in the sun reaches 60° C., and the author comments upon the necessity of taking the thermometer under shelter to prevent its bursting.

The country generally is considered very unhealthy, as even the natives suffer with the fever.

In the first appendix notes are given upon the fragmentary history of the people of this region, which is about equal in area to that of France. The habits and customs of the people are briefly discussed. The earlier type of punishments for disobedience or neglect are of the most cruel character for even the slightest offenses, as, for example, when one of King Lewanika's rowers became tired he was deliberately thrown overboard to keep company with the crocodiles.

The religious ideas of this section of the country are more advanced than in any other portion of Africa. They have a modified form of ancestral worship, without idols or fetiches. They have both male and female supreme beings, the former symbolized by the sun and known as Nyambe, while the latter is represented by the moon. She was the mother of the animals, and finally of man. Eventually Nyambe and the men of the world came into disagreement, and while he showed his power by resuscitating the animals which men killed, man, however, became so very intelligent that Nyambe was forced to escape to the heavens by means of a spider's web and has been invisible since that time.

They believe in metempsychosis and during their life choose the animal form in which they prefer to return to the earth. They initiate themselves by eating worms from the decayed bodies of their chosen animal. They will then, upon any festal occasion, act the part of these animals by imitating their motions and their cries.

They are very superstitious, believing in charms of all sorts, and they attribute the better shooting-powers of the white man to be due to the possession of an amulet of which they are ignorant.

These natives are an industrious people and work metals very well, and although their

methods are of the most primitive sort they produce good spears, axes and knives. Under proper guidance they could easily develop along mechanical lines, and missionaries who have lived with them many years wish very much to start an industrial school with this in view.

The resources of the country are little known. Iron is known to exist, but the main value of the region, so far as seen, is in its woods, many of which would be valuable even for transportation. Animals are still found in great numbers and variety, although the most valuable of them all, the elephant, is said to be disappearing rapidly. The insects are likewise numerous and are said to be a terrible pest.

The words of the missionary Coillard concerning this part of the world, where the waves of immigration are dashing their foam well in towards the center of the continent, are significant:

"Listen to the native songs in a minor key; they are in reality but groans. Hear them tell you that their heart is black, *i. e.*, that it is full of sadness, yes, black as their skin, and you will realize that from the cradle to the grave they carry through life the symbol and the livery of sorrow. If these races are to have a future, as seems certain, what will it be? It seems that it will undoubtedly be dependent upon the character which the mental, moral and physical powers of the white race will choose to give it."

The second appendix gives a summary of the report made by Captain A. Saint-Hill Gibbons, Percy C. Reid and the author to the Royal Geographical Society on January 4, 1897 (see *Geographical Journal*, Vol. IX., No. 2).

WILLIAM LIBBEY.

The Art of Taxidermy. By JOHN ROWLEY, Chief of the Department of Taxidermy in the American Museum of Natural History, New York City. New York, D. Appleton & Co. 1898. Pp. xii + 244. 20 plates and 59 text figures.

This book is a good exemplification of the adage that there is always room at the top, for while scores of books have been written on the art of taxidermy, and the best of them within the last decade, this is none the less indispen-

sable to any one who wishes to keep up to date. The eight chapters into which the work is divided are devoted to collecting; tools and materials; casting; birds; mammals; fish, reptiles and crustaceans; skeletons; and the reproduction of foliage for groups. There is in addition an appendix giving the addresses of reliable firms from whom tools and materials may be purchased. All these contain important information and all are based on personal experience, and while naturally in some cases much of the ground has already been covered, yet it is surprising to see how much there is not only new, but good. The most important chapter is that relating to the mounting of mammals, and particularly of large mammals, ability to do this well being the crucial test of a taxidermist. Time was when they were stuffed in the most literal sense of the word, but the last twenty years have wrought a great change, and it no longer suffices to simply fill a big mammal with straw; he must be fitted to a nicety over a manikin modeled into shape with the greatest care. Mr. Rowley's special device is the *papier maché* manikin made on wire cloth, and this he claims when the skin is properly glued on will stand the test of time, a claim that is borne out by the appearance of specimens mounted in this manner, although we can be more certain of the result ten years from now. Only those who have had a practical acquaintance with the mounting of large mammals and watched their behavior in steam-heated halls can appreciate the desirability of some process that will give freedom of manipulation and prove enduring, for, like Mr. Rowley, we have seen the wreck and ruin of some beautiful specimens that simply went to pieces through the splitting of the skin, brought about by atmospheric changes. It might, however, have been well to have briefly described the manikin of excelsior, giving it as an alternative, since in the majority of cases it will do very well, and one without experience might hesitate before attempting the somewhat more difficult *papier maché* method.

Another valuable chapter is that devoted to the reproduction of foliage and flowers, for while this subject is well treated by Montagu Brown, yet he unfortunately omits a most important piece of information which Mr. Rowley

supplies, namely, how to make the 'fabrie' which is the basis of it all. While this reproduction may not be taxidermy, it has yet become an important matter since the modern museum calls, or should call, for the exhibition of groups showing animals amid their natural surroundings, and unless these surroundings are duplicated with great skill the result is discouraging.

The chapter on skeletons, though brief, is very good, although we suspect it would not occur to any one not familiar with the manner in which things are done at the American Museum to suggest the use of porcelain bath tubs for macerating purposes.

In regard to fishes Mr. Rowley well says that in most cases they are better reproduced by casting than by skinning and mounting the skin, and this is emphatically true of the larger species which seem to delight in setting at naught all efforts to mount them.

Here and there one could wish for just a little more information than is given, but as one of the aims of the book was to supply a good manual at a moderate price, conciseness was necessary and the book can be recommended not only to those who wish to be, but to those who already are taxidermists.

F. A. L.

Water and Public Health. By JAMES H. FUERTES. New York, John Wiley & Sons. Pp. 75. Price, \$1.50.

The method adopted by Mr. Fuertes, of stating many of his statistics in graphic form, is very acceptable to the general reader. The eye will grasp the meaning of a chart, and the mental picture of the same will be retained, while groups of simple figures make but a small impression.

An excellent point, insisted on by the author and forcibly illustrated, is that Europe is far ahead of us in the matter of carefully purifying such public waters as are suspected of being contaminated, and he further shows that America cannot expect immunity from epidemic disease should she continue the use of polluted supplies. The book is a valuable contribution to the literature of Water Supply.

W. P. MASON.