

## CENTRAL AFRICAN HABITATIONS.

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Commander Cameron, R. N., whose famous journey across Africa has proved so rich in valuable additions to our geographical knowledge of a little-known portion of that continent, gives, in the record of his travels, the sketches from which the annexed illustrations are made. Both represent discoveries which will afford an excellent idea of the ethnological importance of a study of the people of Central Africa and their habits.

Fig. 1 represents the curious village of Manyema, where the explorer found the houses arranged in regular streets, and the latter kept scrupulously neat and clean. The inhabitants, although cannibals, are much more civilized than their neighbors, and appear to be a conquering race which has enslaved the tribes of the vicinity. They are skillful iron workers, and erect furnaces which show considerable inventive ability.

It is well known that, in pre-historic times, whole villages were often constructed on piles, above lakes. Relics of these dwellings have been abundantly found, belonging to extinct peoples representing all stages of civilization, from the age of stone down to the dawn of the iron age. It is not understood why the ancients adopted this form of habitation. Protection from hostile tribes, safety from wild beasts, and convenience in fishing, have all been suggested; but there are reasons which go to show that none of these explanations are entirely satisfactory. Commander Cameron has found the same species of dwellings in use on Lake Mohyra, in Central Africa, and in Fig. 2 one of the huts is represented. The inhabitants are excellent swimmers, and, although provided with boats, frequently take to the water in preference to using them.

The lake dwellings of which our engraving gives a specimen are to be found in all parts of the world. The oldest known are in Switzerland, and in that country they have been thoroughly explored. They are of two kinds, those built of fascines and those built on piles. Those of fascines were commonly used on the smaller lakes of Switzerland, and wherever the bottom was too soft to hold a mass of piles firmly; those of piles were built in deeper water, where the waves would sweep away a foundation of fascines. Lake dwellings as old as the stone age are found in some parts of Russia, and in Borneo and the Malay archipelago, as well as in Africa. Herodotus mentions them on Lake Prasias, in Thrace; and as these were connected with the shore only by a single narrow bridge, the inhabitants were enabled to defy the troops of Darius. Each family occupied one hut, and caught fish by letting a basket down through a trap door.—*Scientific American*.

## MIGRATION OF BIRDS—WHAT GUIDES THEM?

Now, the question will be asked, "How are birds guided upon their journey?" It is hard to answer. Naturalists know something about it, but very little indeed. We know that many birds, the geese for instance, put themselves under the direction of a leader, and we know that this leader is an old bird which has made the journey often before. Many birds are hatched so late in the season that they are too young and feeble to make the journey at the time their friends start for the south. Therefore, they are left behind, and, although they soon grow up and become strong enough to migrate, they do not know the way, and, as there is no old bird to show them the path, they are compelled to stay through the winter, and live upon such food they are able to find. We see from this that the journey is not directed merely by instinct, but that some experience is also necessary; for, if it were not, young birds could find their way as well as old ones. Then we can not understand how it is that geese become confused and lost in stormy weather, unless we believe that they find their way by memory of the landmarks. No one who watches a troop of swallows, when they are preparing to leave us in the fall, can doubt that the knowledge of the older birds is very important. As the time for migration draws near, these birds gather in large flocks and spend several days in preparing for the journey. They keep up an incessant twittering, and often start off for a short flight in order to try their wings; when at last they have learned the surrounding country so well that they will have no difficulty in recognizing it when they return, they mount into the air together, at a signal from a leader, and begin their long voyage to the south.

These noisy consultations and preliminary flights would not be necessary if the migration were entirely due to instinct; and those who examined the subject the most carefully, conclude that both instinct and experience have part in it.—*St. Nicholas*.

## MUSHROOMS.

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To those living in the neighborhood of forests in Europe, especially in France, mushrooms form an important item in domestic economy. Being among the most nitrogenous articles of diet, they well deserve the name of "vegetable meat," which has been bestowed on them. We publish herewith engravings of three kinds of edible mushrooms, all well known in France, and which might be more generally introduced here to the great satisfaction of American epicures. The first is the *morille comestible*, the botanical name of which is *Morchella Esculenta*; the second is the plant. The stalk and the upper part correspond to the fruit, as their function is simply to carry the spores.

There is one fact which should be remembered by the lovers of mushrooms, which is that locality has much to do with the flavor of these *fungi*, and even with their fitness for food. The *Agaricus Campestris*, the common mushroom of this country and England, is rejected in the markets of Italy as unwholesome; while the chantarelle, a highly prized rarity in England and a favorite species in France, which is represented in Fig. 3, was not relished when found in North Carolina by Mr. Curtis. This writer states that he ate of 40 different species of *fungi* gathered within two miles of his house, and that he found 111 kinds in the State.

## HEALTH AND MARRIAGE.

The *Sanitarian* takes strong ground that marriage, at the proper time, is favorable to health and long life. By the statistics of M. Bertelon and others, in a discussion of the subject before the French Academy of Medicine in 1871, from 25 to 30 years of age, married men die at the rate of 6; the unmarried 10; and widowers at 22 per 1,000 annually. From 30 to 35 years, the deaths among the same classes respectively are 7, 11 and 19½; from 35 to 40, 7½, 13 and 17½ per 1,000, and the same favorable conditions to the married continue at greater ages. But married men aged from 18 to 20 die as fast as men from 65 to 70.

Among women marriage is not quite so favorable as among men. From 30 to 35, wives die at the rate of 9 and spinsters 11 per 1,000. Under 25 the mortality of wives is a little greater than among single women. After 40 years of age, the longevity of married women is much greater than that of the unmarried.

The probabilities of life in this connection are—a man of 25 who marries has an expectation of 40 years' married life; if he does not marry, his expectation at that age is only 35. A woman who marries at 25 may expect to live until she is 65; if she remains single, to 56 years of age. Widowers and widows are nearly as badly off as those who do not marry.

**RAPID SYSTEM OF PLASTERING.**—By the use of this system, the lathing and two coats of plastering, with lime and hair, give lace to large slabs fixed to the joists, which form the body of the ceiling at once. The edges of these slabs are bevelled reverse ways, and fit into each other so that the stopping cannot be shaken out. The faces of the slabs are made rough, and the whole receives a thin finishing coat of cement or stucco, which effectually conceals the joints, and produces ceilings of good appearance. By this means no time is lost in waiting for drying; and the annoyance of dirt and rubbish caused by mixing and using lime and hair is entirely avoided. The manufacture of the slabs may be briefly described. A sufficient quantity of plaster and fiber is mixed with glue-water; half of this, while in a plastic state, is spread evenly upon a plate-glass bench, with edges raised three-eighths of an inch, beveled. A sheet of strong open canvas is then stretched tight across, and wrapt round two laths which are embedded in the two edges of the slab. The object of having these laths is to tighten the canvas, and to stiffen the edges of the slabs in their span from joist to joist. The remaining portion of the plaster and fiber is spread evenly upon the canvas, which then remains firmly embedded through the centre of the slab. A bass broom is then passed over the face of the slabs to form a "key" for a finishing coat. When sufficiently set, the slabs are removed from the bench, and exposed to the air to dry. These slabs are two feet six inches wide, of sufficient length to reach across four joists, and are secured to the joists by driving 1½ in. zinc nails through the laths before mentioned, and about four inches apart, along wherever the joists come. The joints are then roughly stopped with cement, and the whole receives a thin "setting" or finishing coat of cement or "stucco," as in the ordinary way. The system certainly has its advantages.—*Builder*.