other and more civilized half of the globe, has carried all before it, only showing in isolated spots, and by relics of custom, the former existence of matriarchal society. Such a geographical view of the matriarchal region makes intelligible, facts which, while not thus seen together, were most puzzling. Though it is only of late that this problem of ancient society has received the attention it deserves, it is but fair to mention that its scientific study began long ago, in the part of the world where we are assembled. It is remarkable to find Father Lafitau already pointing out, in 1724, how the idea of the husband being an intruder in his wife's house bears on the pretence of surreptitiousness in marriage among the Spartans. He even rationally interprets in this way a custom which to us seems fantastic, but which is a most serious observance among rude tribes widely spread over the world. A usual form of this custom is, that the husband and his parents-in-law, especially his mother-in-law, consider it shameful to speak to or look at one another, hiding themselves, or getting out of the way, at least in pretence, if they meet. The comic absurdity of these scenes, such as Tanner describes among the Assineboins, disappears if they are to be understood as a legal ceremony, implying that the husband has nothing to do with his wife's family.

It is obvious that in this speculation, as in other problems now presenting themselves in anthropology, the question of the antiquity of man lies at the basis. Of late, no great progress has been made toward fixing a scale of calculation of the human period; but the arguments as to time required for alterations in valley-levels, changes of fauna, evolution of races, languages, and culture, seem to converge more conclusively than ever toward a human period, short, indeed, as a fraction of geological time, but long as compared with historical or chronological time. While, however, it is felt that length of time need not debar the anthropologist from hypotheses of development and migration, there is more caution as to assumptions of millions of years where no arithmetical basis exists, and less tendency to treat every thing prehistoric as necessarily of extreme antiquity; such as, for instance, the Swiss lake-dwellings and the Central-American temples. There are certain problems of American anthropology which are not the less interesting for involving no considerations of high antiquity: indeed, they have the advantage of being within the check of history, though not themselves belonging to it.

A brief account may now be given of the present state of information as to movements of civilization within the double continent of America. Conspicuous among these is what may be called the northward drift of civilization, which comes well into view in the evidence of botanists as to cultivated plants. To see how closely the two continents are connected in civilization, one need only look at the distribution on both of maize, tobacco, and cocoa. It is admitted as probable, that, from the Mexican and Central-American region, agriculture travelled northward, and became established among the native tribes. This direction may be clearly traced in a sketch of their agriculture. The same staple cultivation passed on from place to place. Agriculture, among the Indians of the great lakes, is plainly seen to have been an imported craft by the way in which it had spread to some tribes, but not to others. The distribution of the potter's art is similarly partial. With this northward drift of civilization other facts harmonize. Now that the idea of the mound-builders being a separate race of high antiquity has died out, and their earth-works, with the implements and ornaments found among them, are brought into comparison with those of other tribes of the country, they have settled into representatives of one of the most notable stages of the northward drift of culture among the indigenes of America.

NOTES AND NEWS.

IN order to facilitate the work of the Electrical conference to be held in Philadelphia, the chief signal-officer has issued to the members of the conference the following subjects, as suggested for discussion, with a view to recommending proper observations and reports: 1. What unpublished records exist in the hands of electric-lighting, telegraph, and telephone companies, relative to ground-currents and atmospheric or auroral influences? 2. What is the general experience on east-west, north-south, and other lines? 3. What records can be kept by managers of all lines without interfering with daily business? 4. What special observations can be made? 5. What special lines can be, perhaps, wholly devoted to the continuous record of the phenomena? 6. Do, or can, the noises and currents, as observed on telephone and telegraph lines, give information as to the location and future movement of a thunder-storm, aurora, rain, cold wave, etc.? 7. Are observations on buried lines, or those covered with metallic tubing, or double aërial lines, specially desirable? 8. How can we best secure a complete daily electric survey of a given small portion of country, and a general survey of a larger region? 9. What is practicable in the way of securing a daily map of the distribution of atmospheric and terrestrial electric potentials? 10. Who will maintain self-recording electrometers?

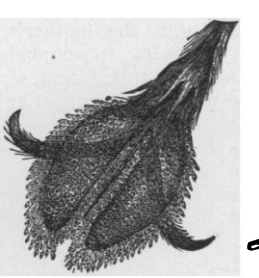

FIG. 1.

FIG. 1a.

FIG. 2.

— The ability of flies to walk on glass and other polished surfaces receives a new explanation at the hands of Dr. J. E. Rombouts in the *Archives du*

musée Teyler, ser. ii. part 4. He denies the former views, that it is due to pressure of the air, or to the effect of a viscous liquid exuded by the foot, and says that it can be accounted for only by capillary action. In order to study the process, he enclosed a fly in a thin box with a glass plate as a bottom; and, when the box was turned so that the glass was uppermost, the feet could easily be studied under the microscope. The cushions of the fly's feet are distinctly seen to be covered with club-shaped hairs (fig. 1., 1a.) to the number of eight hundred or one thousand, arranged with considerable regularity. From these a fatty liquid is exuded, which leaves on the glass a trace of their contact (fig. 2). The ability to adhere to the glass arises from the attraction exercised by each of these little drops of liquid on the hair from which it is exuded. Various experiments with hairs are recorded to show that capillary force would be sufficient to easily bear the weight of a fly, even were the fluid pure water.

— The accompanying map of the north-western shores of Hudson's Strait is of interest at the present time, on account of the expedition which lately went there under the command of Lieut. A. R. Gordon, to gather information as to the possibility of using the strait in a line of water-connection from the west to Europe. The map was compiled by Lieut. Frederick Schwatka, from surveys made by him while on boat-journeys in August, 1880, and winter sledge-journeys, and from information gathered from whalers, and gives the position of many localities first named by him.

— Dr. Chervin has been studying the medical geography of the department of the Seine inférieure with reference to disabilities which are developed by the annual conscription. The period chosen covered twenty years. After those cases of feeble constitution, evidently unfit for military duty, the most frequent disability was dental caries, after which followed hernia, etc. In considering the department as a whole, the average number of conscripts rejected on this account was fifteen per cent; but, in considering the separate cantons, it was shown that they vary greatly in this regard, the least average being eight per cent, and the highest nearly twenty-four per cent. In seeking a cause for this singular difference, that sometimes alluded to, the drinking of sour Norman cider, was considered to have little real influence. The question of race was believed to be more important. So far as form and height are concerned, the tables for twenty years showed two physical groups or races, — the smaller in the west; the larger in the east, especially about Dieppe and Neufchatel. The taller race is much more subject to dental caries than the other, and this is confirmed by testimony from other departments. Baldness prevails to such an extent, that two per cent of the recruits examined were exempt, on that account, at the early age of twenty. Some connection appears to exist between this deficiency and decay of the teeth.