THE U. S. CENSUS OFFICE.

THERE is a popular disposition to belittle the importance of the census, and to underestimate the value of what has been accomplished under the direction of Gen. Walker, which will pass away when the magnitude of the difficulties to be overcome, and the skill displayed in handling such a mass of figures, are better understood by the public. Six volumes have already been issued, which have excited the admiration and enthusiastic approval of statisticians on both sides of the Atlantic. It is said that the whole number of volumes will be nearly twenty, of which some are now in type, others ready for the compositor, and of a part the manuscript copy is not yet fully prepared. The entire series will constitute an encyclopaedia of information, not only as to the population of the United States and its composition and growth, but as to the financial and other resources of the country, and the burdens to be borne by the American people, and will be of the greatest historical value. As an advertisement of the national wealth, and of the rapidity with which this country is assuming a foremost position among the nations of the earth, the tenth census is worth many times its cost; and we are not claiming too much for it when we venture the assertion that no statistical work of equal extent and merit has ever been executed by any nation.

The unpopularity of the census appears to be due, partly to its having exceeded in cost the original estimate, and partly to the delay in the publication of the results. But it is not surprising that Congress was unable to foresee the actual amount of expense involved in so elaborate and exhaustive an inquiry; and the delay in publication is owing to insufficient appropriations from time to time, and the too rapid reduction of the force engaged, which has unduly prolonged the examination and tabulation of the returns. It is probable, also, that the failure to ask and obtain sufficient appropriations has curtailed the proportions of the work, and led to the omission of information which was in fact gathered, and might have been given to the world.

Really it is more than doubtful whether the methods adopted for taking the census do not need to be thoroughly revised, and new methods adopted. It must be a serious loss to the government to do as it does, — to disband the force trained for this special undertaking, and scatter it, once in ten years, and then reorganize it with unskilled and inexperienced clerks, who require to be educated at great expense before they understand what it is that they are employed to do. No other scientific undertaking is carried on in this way. We assume that the purely clerical portion of the work may be done by untrained clerks, if they are directed by skilled and competent chiefs of division, just as raw recruits may be of service in war, when drilled and commanded by veterans. But it would seem that the office of commissioner or superintendent of census ought to be made a permanent one, and work enough assigned to this bureau to employ a permanent staff of assistants capable of giving impulse and direction to the largely augmented number of clerks required when the decennial enumeration of the population is made. There are many varieties of social statistics which it would be desirable to collect and publish annually; and it is not essential that all the special and occasional investigations which are of national importance should be made at the same moment of time. Why might not the population be enumerated in one year, and the agricultural statistics obtained in another, and so on? Then, too, it is difficult to conceive how a census can properly be made without reference to documents, state and municipal, which should be permanently preserved in a special library under the control of the office, with a librarian charged with the duty of keeping it up, and thoroughly acquainted with its contents and arrangement; which implies a permanent census bureau. Lists of correspondents are also requisite, which should be constantly revised and corrected. The additional expense of a permanent force, which need not be large, would be far less than the waste of money occasioned by the want of thorough preparation for taking the census on the present plan, and the mistakes and misdirected energy of a clerical force destitute of scientific knowledge or skill, unacquainted with each other, and unorganized for effective work.

There must also be improved modes of collecting and digesting information which are practicable. The process of tallying results by hand, so painful and slow, which is at present in vogue, must give way to some other process, involving less mental and manual labor, and increased accuracy. Too many clerks and too much time are required to meet the wants of an active and impatient people like ours. We do not appreciate information which is not recent and fresh. There must be some way devised of utilizing steam or electricity in the tabulation of results. If this can be accomplished, then instead of waiting several years for the published census, as we now have to do,

we might hope to have it on the shelves of our libraries in six months, or a year at most, after it is taken.

These remarks are made purely in the interest of science. Scientific investigation deals, first, with the elementary substances of which masses are composed, then with the forces which are at work to combine them into composite forms, and finally with the relations and principles which characterize and control organisms. Human society is an organism, for the right apprehension of which it is as essential to accumulate facts, and by means of comparison and analysis to deduce the laws which govern social phenomena, as it is to follow the same method of study in any other branch of science. The political and commercial bearings of the census we do not discuss; but it is evident that the census of the population and material resources of this country has for us a special significance, in view of our representative form of government and of the unprecedented growth of the American people. To these considerations may be added another; namely, that no other nation has such a heterogeneous population, and therefore such need of self-introspection, in order to comprehend its true capacity, limitations, and destiny. The political and financial needs of the country minister to science, and promote scientific research in this particular direction. All that scientific men insist upon is, that the investigation shall be in competent hands, and conducted according to the principles and methods which have done so much for science in general. A census bureau, wisely constituted, might, with respect to social science, occupy a relation, and perform a work, similar to that of the Smithsonian institution in the domain of the natural and physical sciences.

HEAD WATERS OF THE ATNA OR COPPER RIVER.[1]

VERY little has been known of this river, which enters the Pacific in about latitude 60° north, longitude 145° west. Several prospectors were left there tomake explorations last year, and will be called for this summer. The Ah-tena or Atnah Tinneh Indians reside on its banks, and from its bed have been taken numerous pieces of native copper resembling that of the Lake Superior region. The Wrangell Volcano is situated near it, about a hundred miles from its mouth.

In crossing the Chilkat portage from the head of Lynn Canal to the head waters of the Lewis branch of the Yukon, the head waters of another stream, called the Altsek River, are crossed. The natives allege that this stream falls into the sea; and on Tebienkoff's charts the mouth of the Altsek River is placed on the ocean-coast just north-west from Mount Fairweather, in the bed of the Grand Plateau Glacier. The observations of the U. S. coast-survey party, under my charge, in 1874 showed that no river from the interior could enter the Pacific between Cape Spencer and Yakutat Bay; all the depressions of the St. Elias Alps being filled with glaciers. In recent charts the Altsek has therefore been connected by a dotted line with the White River, one of the branches of the Yukon. I have for some time suspected that the Altsek was the head of the Copper or Atna River, but until lately have had no evidence sufficiently weighty to make it desirable to alter the charts. A recent letter from Dr. Arthur Krause states that his Indian guides told him that they had descended the Altsek to salt water, where there was a small village of Tlinkit Indians. This makes it certain that the Altsek and Atna rivers are continuous; for the Chilkhaat village at the mouth of the Atna is the only one answering to the situation, and the westernmost of all the Tlinkit villages, being separated from most of the others by a wide stretch of unoccupied coast.

This determination is of much importance. It determines the Atna River to be over four hundred miles in length, and the longest river falling into the Pacific between the Fraser in British Columbia and the Aliaskan peninsula. The opportunity for a most interesting exploration is here evident. The explorer need only take a couple of good canoes or portable boats up the Chilkat River, and across the portage to the Altsek, and float down the latter. Within a couple of days of the mouth of the Atna is the trading-post of Fort Constantine at Port Etches, commonly known as Nuchek, where supplies could be had and arrangements made for the trading company's vessel to convey the party to St. Paul, Kadiak Island, whence transportation to San Francisco could be had without difficulty, at some time during the autumn.

WM. H. DALL.

[1] Communicated by authority of the superintendent of the U. S. coast and geodetic survey.

THE ETOWAH MOUNDS.

IN *Science* of April 11 is an article by Mr. W. H. Holmes, on certain engraved shells and figured plates of copper found in southern mounds. As some of the most interesting of these articles were obtained from one of the