

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 to make 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

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

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.

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