

THE COPPER MINES OF LAKE SUPERIOR

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The Copper Mines of Lake Superior by T. A. Rickard

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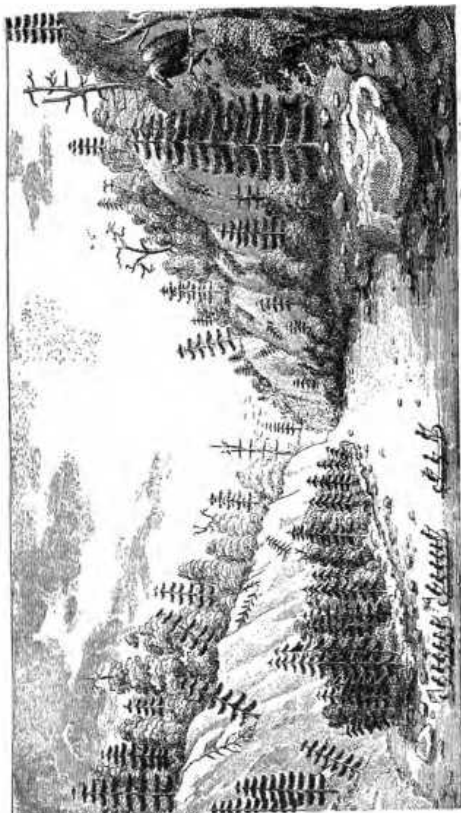
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T. A. RICKARD

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THE ONTONAGON BOULDER — MA

From a drawing made in 1819.

1820 and to no way in Schuchardt's work. The journey made in 1821

THE COPPER MINES
OF
LAKE SUPERIOR

BY
T. A. RICKARD

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OF THE ROYAL SCHOOL OF MINES; MEMBER OF THE AMER-
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ORE IN A MINE.'

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THIS LITTLE BOOK
IS
DEDICATED
TO
JOHN STANTON

IN CORDIAL APPRECIATION OF LIFE-LONG SERVICES,
WHICH HAVE BENEFITED NOT ONLY THE COP-
PER MINES OF THE UPPER PENIN-
SULA, BUT THE BEST INTER-
ESTS OF A WORLD-WIDE
INDUSTRY

191155

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PREFACE

ANY good American, desirous of impressing an intelligent visitor from another country, say, for example, Macaulay's New Zealander, with the permanent and profitable character of the mining industry of the United States, would be wise in choosing the copper country by the Great Lakes in preference to any other of our splendid mineral regions. Sixty years of productiveness represent history in our unresting industrial growth; an annual yield of 200,000,000 pounds of refined copper is in itself impressive, for it means 15 per cent of the total output of the world; mines one mile in vortical depth appeal to the imagination; a single stamp that crushes 700 tons of ore *per diem* has a thunderous way of proclaiming its importance; well-ordered communities aggregating about 80,000 self-respecting people indicate favorable conditions of living; and, when the visitor is weary of the immensity of the operations carried out by man on the Keweenaw Peninsula, he can turn with deep restfulness to the splendor of earth and sky, to the beauty of forest and wave, to the long promontories dividing the surface of Lake Superior, and the blue line of the Huron mountains.

As the traveler journeys from Buffalo to Houghton, and thence to Duluth, on a steamer itself of dimensions that challenge many Atlantic liners, he is stimulated by a swiftly moving panorama of shores on which every kind of industrial development is proceeding; he will encounter the vast freightage which bears the produce of the north-western wheatfields, the iron ores that are the material foundation of modern civilization, the lumber from the Michigan forests, and the copper on its way to the refineries of New Jersey; this traffic being met by vessels heavily laden

with coal, merchandise, machinery and the immense supplies consumed in the exploitation of natural resources of great diversity. He will be on an internal waterway which is 2,100 miles long from Duluth to the mouth of the St. Lawrence, a continental line of communication the traffic of which, as measured at the locks of the Sault Ste. Marie, is more than double that of the Suez canal. And it is impressive, not as measured by tonnage alone, but because instead of the sand marshes of Suez, the barren mountains of Sinai, and the blistering deserts of the Libyan coast, this great commercial artery of North America separates, and unites, two English-speaking nations whose multitudinous energies are expressed in an uninterrupted succession of mills and factories, docks and railroads, and a continuous line of throbbing steamers that bear the commerce of a continent down the long-linked series of lakes, canals and rivers to the marts of the world.

It is this mining region which I have endeavored to describe, by the aid of observations and information secured during three weeks in the summer of 1904. For much of my material I am indebted to the courtesy of mine managers and engineers, whose names are mentioned, with grateful acknowledgment, in the pages that follow. During the whole of my stay at Houghton I received the help, and frequently the stimulating companionship, of Mr. F. W. McNair, president of the Michigan College of Mines, and of Mr. L. S. Austin, professor of metallurgy in that most efficient technical institution. To these two friends I am under particular obligations.

One matter, to which I regret to refer, requires mention in this account of the copper mines of Lake Superior; for, unpretentious as my story is, I desire it to be an honest portrayal of mining affairs in the Upper Peninsula during the year 1904. Therefore, this explanation.

Those who read these pages will be surprised—and disappointed—to find only scant reference to the two mines