

reached "cap rock" would build a fire under it and then crack it by dashing cold water on the heated surface. Their tools, in the earliest times, were buck-horns, many of which were found in abandoned drifts by the early white settlers; but in Dubuque's time they obtained hoes, shovels, and crow-bars from the traders to whom they sold lead. The Indians loaded their ore at the bottom of the shaft into tough deer-skins, the bundle being hoisted to the surface or dragged up inclined planes by long thongs of hide.¹ Many of these Indian leads, abandoned by the aborigines when the work of developing them became too great for their simple tools, were afterwards taken possession of by whites, with improved appliances, and found to be among the best in the region. Early writers generally agree that the Indian mining was almost wholly conducted by old men and squaws, the bucks doing the smelting. However this may be, it is certain that in later days a good many bucks worked in these primitive mines, and many of them are known to have assisted Dubuque. The Sacs and Foxes were the owners of the lead-mine district during the eighteenth century, but by the treaty of 1804 they relinquished their lands east of the Mississippi, and the gypsy Winnebagoes then squatted in the district: although with them were mingled many Sacs and Foxes who had married into the Winnebago tribe, in addition to "the British band" of Sacs, around Rock Island, who were afterwards (1832) implicated in the Black Hawk disturbance.

Dubuque appears to have largely employed his Indian friends in prospecting for lead mines. When their discoveries were reported to him, he would send Canadians and half-breeds to prove the claims and sometimes to work them; although, in many cases, he was content with proving the claim and allowing the Indians to work it themselves, the product being brought to his large trading-house on the west side of the river. In this manner the entire region of the lead mines in Iowa, Wisconsin, and Illinois became

¹ *Hist. Grant Co.* (Chicago, 1881), p. 477.