

# Robert Bald, Forgotten Coal Mining Reformer

By William John Shepherd

Robert Bald (1776–1861) was a Scottish surveyor, civil engineer, mining engineer, antiquarian and social reformer. Scion of what author Isabel Grant Stewart called “an enterprising family,” he was eulogized by John Crawford as a “friend and counselor to Prince, Peer, and Peasant.” A man of both science and faith, Bald was a person whose intellectual ability, faith in God, personal ambition and humanitarian zeal did not always redound to his best advantage. Like so many Scots, he had great abilities but often found himself mired down in conflicts of his own making.

Bald was born on January 27, 1776 in the Scottish town of Alloa in Clackmannanshire on the north side of the Firth of Forth, an area where mining and distilling were the major industries. Baptized on February 4, he was the eldest of six children of coal mining agent Alexander Bald (1753–1823) and Jean Christie.

Bald’s father, who was well known in his time, had managed the Earl of Dundonald’s coal mine in Culross until 1774. Thereafter, he served until his death in 1823 as manager of the Earl of Mar’s

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Carsebridge and Collyland mines, as well as of a section of wooden rails that transported the newly mined coal to the Alloa harbor.

As a young man, Robert Bald apprenticed as an engineer under his father, who schooled him in both practical knowledge and scientific inquiry. By 1800, he was an increasingly sought-after mining consultant in the coalfields of Scotland, publishing reports on mineral deposits and mining operations, including infrastructure and drainage.

Bald also worked closely with Thomas Telford (1757–1834), the celebrated first President of the Institution of Civil Engineers and builder of the Caledonian Canal, as well as nearly a thousand miles of roads in Scotland. In 1808, Bald went with Telford to Sweden to survey the site for the proposed Gota Canal. The canal was to stretch from Lake Malaren near Stockholm to the Vanern and Vattern lakes in central Sweden. The king of Sweden rewarded Bald for his part in the project with a gold snuff box set with diamonds that became a family heirloom.

Back in Scotland, Bald leased the



*Robert Bald's ambition, intelligence and humanitarian impulses often created conflicts in his life.*

Sohawpark Estate from the Earl of Mansfield and developed a coal mine there at New Sauchie. In 1808, he published, *A General View of the Coal Trade of Scotland — an Inquiry into the Conditions of the Women who carry Coals Underground in Scotland, known by the name of Bearers*. With this publication, Bald hoped to raise public indignation against the terrible working conditions for women in the mines.

At that time, wives traditionally helped their coal-mining husbands and older sons, who would generally go to work around eleven o'clock at night, cutting (hewing) coal from the wall of the mine. Shortly after midnight, the women and their older daughters would leave the younger children with elderly neighbors and descend into the mine with their baskets.

Once the women had loaded the coal their husbands had hewn into their baskets, they would painfully climb to the mouth of the pit, often holding lighted candles in their mouths so they could see. For mere pennies a day each woman, called a "bearer," pushed, pulled or carried tubs of coal weighing as much as 200 pounds more than 100 yards up steep tunnels and/or stairs to the pithead, where the coal was sorted and loaded for transport. In one day, a woman would make up to two dozen round trips!

As manager to coal mines belonging to the earls of Mar in Alloa, Bald condemned the use of women and children as coal bearers. He created friendly societies to help miners save money, provided small pensions to retired miners and organized a court system where

miners could address and settle matters among themselves.

By the late 1820s, with trustees overseeing coal mining operations on the Erskine family's behalf, Bald and estate factor Robert Jameson actively directed the mines. Reforms instituted by Bald included increased housing, sweeping of the streets and no ashes or wastewater to be thrown into the gutters. He gave lectures on cleanliness and issued rules requiring that miners periodically wash and whitewash

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their houses. The rules also prohibited cattle, pigs, poultry or dogs within miners' houses. Additionally, he developed a widely resented plan to inspect the miners' houses. Not surprisingly, his inspectors were locked out by angry housewives and Bald was subjected to public scorn.

As a reformer, Bald was especially critical of the miners' excessive consumption of alcohol, which he blamed for the cholera epidemic that broke out in Alloa, Collyland

and New Sauchie in 1832. The outbreak killed more than 30 people. Publicly, Bald stated that the disease was God's judgment on the miners for their drunkenness, particularly at funeral wakes.

He supplied weak wine to replace the more powerful whisky the miners preferred; promised dismissal for anyone found drunk on the streets by patrolling watchmen; and sponsored prayer meetings at Alloa, Collyland and New Sauchie. These meetings had several rules of conduct, including the exclusion of unrepentant drunkards from society.

By the 1830s, Bald's reforms, though intended to benefit the miners, had angered them greatly. Eventually, the men joined their wives in rebelling and refusing to work. Bald's employer, by this time John Francis Miller Erskine, the 25th Earl of Mar, was forced to confront the stubborn engineer.

Bald said that, if his methods were not supported, he would either resign or take full responsibility for the management of the mines when the lease expired in 1835. The latter alternative was agreed on. In time, Bald took over the Collyside, Woodlands and Devonside coal mines, which he managed according to his philanthropic principles, while a group of businessmen operated the Alloa mine.

Bald now had control of three mines, but his reforming methods were no more popular than before. Displeasure extended to his new business partners who believed he was quixotically wasting his effort and, more importantly, their money. They argued that they were not social engineers but had invested for profit

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## Robert Bald

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and had no interest in matters not directly related to the mining and marketing of coal and other minerals. They withdrew their support, and since Bald was unable to continue without them, the three mines came under the same businessmen who had taken over the Alloa mine.

Thereafter, Bald returned to private practice as a consulting engineer, in partnership with John

of women in Scottish and English mines as little more than disposable beasts of burden or human garbage. He firmly believed that reforming the human condition — despite any obstacle and regardless of exertion — was at the core of both Christian charity and scientific progress.

However, despite the best efforts of reformers like him, the public paid little attention to conditions in the mines. Indeed, by 1840, more than 200,000 people, including

some as young as eight years old.

The young Queen Victoria ordered a royal commission inquiry that was headed by Lord Ashley-Cooper (later the Earl of Shaftsbury). The commissioners visited coal mines and mining communities in both England and Scotland to gather information — often against the mine owners' wishes. Their explosive report, *Children's Employment Commission (Mines)*, illustrated with engravings

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*Bald worked tirelessly to improve the oppressive lives of miners, particularly women and children, and drove important government reforms.*

Geddes. He became recognized as a successful and shrewd advisor to major business families such as the Bairds and the Dixons in western Scotland. He also persistently continued his efforts, no matter how unappreciated, to reform the mining industry for owners and workers alike.

As far back as his 1808 publication, *Coal Trade of Scotland*, Bald had advocated especially and specifically against what he considered the cruel, inhumane and uncivilized use

women and children, worked underground in British mines for 11 or more hours per day in terrible conditions and for low wages. Perceptions changed, however, in the wake of an 1838 accident at Huskar Colliery in Yorkshire, England, when a storm-flooded stream overflowed into a ventilation shaft. Twenty-six children died,

and containing personal accounts, shocked Victorian sensibilities with accounts of children as young as five working to open and shut ventilation doors, as well as women working bare breasted in the presence of men and boys.

The report echoed Bald's 1808 treatise and Bald was particularly active and greatly satisfied in sup-

porting the commission's efforts, which ultimately resulted in the British Parliament's Mine and Collieries Act of 1842. The act forbade women and boys under the age of ten being employed in British mines, including those in Scotland.

Bald took on other social causes as well. In 1838, he was one of more than 2,000 people connected with the Emancipation Society who met at Edinburgh's West Church to campaign for the abolition of the system of apprenticeship in the West Indies. Reportedly, Bald seconded the first resolution against the evils of apprenticeship, which he and others considered little more than slavery under another name.

Bald never married. He died,

probably due to prostate cancer, on December 8, 1861, at his home at 14 Bedford Place in Alloa. He was a venerable 85 years of age.

Bald was mourned as a God-fearing man, distinguished engineer and the leading Scottish coal expert of his era. His long list of memberships included the Royal Society of Edinburgh, the Royal Scottish Society of Arts, the Royal Physical Society, the Royal Caledonian Horticultural Society, the Institutions of Civil Engineers, the Wernerian Natural History Society of Edinburgh, the Association for the Promotion of Fine Arts in Scotland, the Society of Scottish Land Surveyors and the Highland and Agricultural Society of Scotland.

In addition to *A General View of the Coal Trade of Scotland*, he authored many notable reports and surveys not only about coal mining but also about other scientific topics such as steam, gases and fossils. Of particular note was his entry on coal in the 1830 *Edinburgh Encyclopedia*. Sadly, Bald's reputation has faded over time, while his character seems paradoxical to the 21st-century mind, an odd juxtaposition of reforming zeal akin to left wing fanaticism, and fervent and uncompromising Christian faith evocative of right wing extremism. ✠

*Author's Note: William John Shepherd, an archivist employed in Washington, D.C., is a descendant of Scottish coal miners.*

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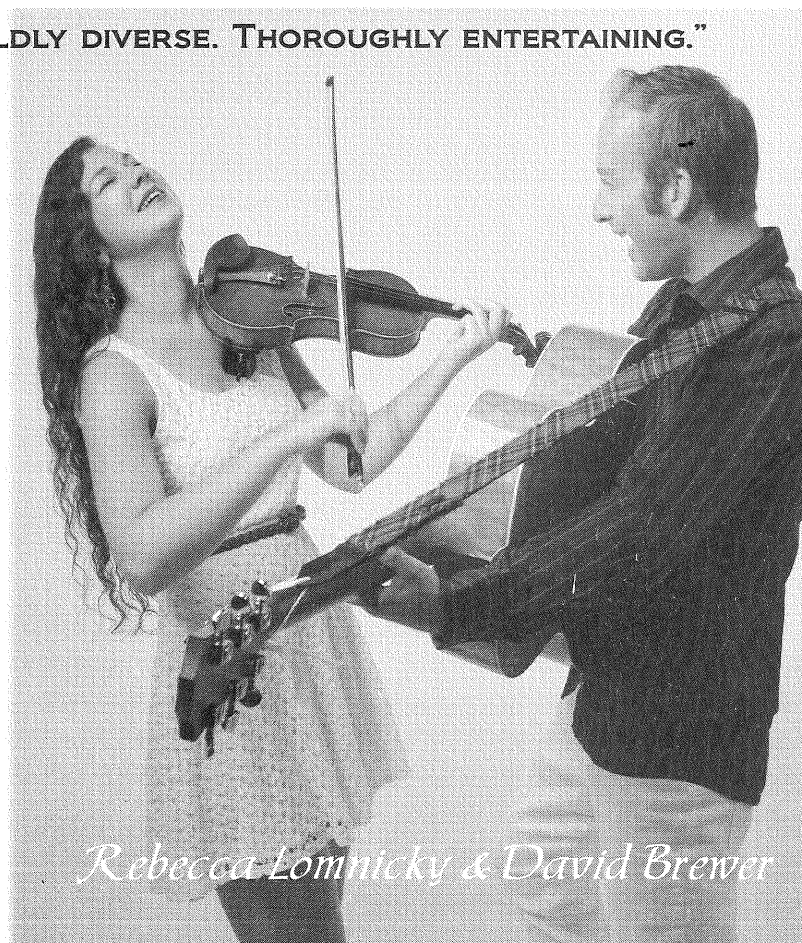
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