

# THE UNENDING HISTORY OF WHALING - ARTICLE 1 - KEROSENE

How whale oil was replaced by a discovery in New Brunswick



## IN THE BEGINNING - Whales provided light

Early societies used whale oil widely in oil lamps and to make soap and other products. The oil was obtained from blubber harvested from whales in a process known as "flensing" and boiled in a process called "trying out".



When whales were caught close to shore or beached, the boiling was generally done on land, but on longer deep-sea whaling expeditions, it was done on the ship and the carcass was discarded at sea.

The oil of baleen whales, the preferred source of oil, is exclusively composed of triglycerides, whereas that of toothed whales contains wax esters.

The bowhead whale and right whale were considered the ideal whaling targets since they are slow and docile and they float when killed. They yield plenty of high-quality oil and whalebone and as a result, they were hunted nearly to extinction.

But, with the commercial development of the petroleum industry and vegetable oils, the use of whale oils declined from its peak in the 19th century into the 20th century. In the 21st century, with most countries having banned whaling, the sale and use of whale oil has practically ceased. (Modified from Wikipedia)

And this change can be attributed to developments in New Brunswick in the 1800s..

## **ALBERTITE - The discovery that changed the world**

The mining industry in Albert County has a long and interesting history. Few places in the world can boast of having such a diverse selection of mineral resources in such a small area. Within the boundaries of Albert County deposits of such minerals as gold, silver, lead, zinc, copper, manganese, gypsum, oil and gas, and natural gas have all been mined.

The most unique mineral ever harvested in Albert County was a shiny black hydrocarbon similar in appearance to coal which is found only in Albert County, and called 'Albertite'.



Albertite was first discovered in Albert Mines, NB in 1820 by Gould Hoar who discovered a deposit of the mineral under an uprooted tree. At first no one realized albertite's potential value as a source of fuel, because it was a new previously unknown mineral and its properties had not yet been determined.

Then geologist Dr. Abraham Gesner began to experiment on albertite and it was from these experiments that he first derived kerosene. Which would make him world famous and lead to today's use of fossil fuels.

Kerosene provided the world with an inexpensive fuel source for oil lamps. It was easier and cheaper to produce kerosene from mined materials rather than send sailors on voyages around the world in search of whales. The process Dr. Gesner discovered for deriving kerosene from albertite was later used to produce other petroleum fuels including oil and gas.

In 1850, the bursting of a sawmill dam combined with annual spring floods eroded the banks of a river in Albert Mines and revealed a huge deposit of albertite.

In 1852, Dr. Gesner claimed the discovery of this new mineral and won a petition from the government that gave he and his company the rights to mine this mineral. Another company argued that the mineral was another form of coal. Since they already owned the rights to mine coal in the area, they argued that they should be given the rights to mine this new mineral as well. The two companies would feud for years to the point of fist fights and guns being drawn at the mine entrance. Dr. Gesner lost his lawsuit but it was later shown that he was in fact correct; albertite is not a type of coal. The mineral, shiny black in appearance, is very brittle to the touch. It can be thought of almost as a form of congealed gasoline, since 57% of the mineral is combustible matter.

The mine was still profitable when it closed in 1884. However, the mine owners apparently believed that the mine would soon become unprofitable, even though there were still large supplies of albertite left in the ground. Captain James Blight would later open another albertite mine below Hillsborough, however, this operation only lasted for a few years. Most of the mined albertite was sent to Boston to be used to enrich illuminating gas.

Since Dr. Gesner could not obtain a steady supply of the mineral, because the mining rights were held by another company, albertite was not used in the production of kerosene.  
(Modified from the [Albert County Museum](#))

### **THE ALBERT COUNTY MUSEUM - Saving the early history of the Petroleum Industry**

Artifacts and information relating to the Albert County Mine and albertite are presented to the public at the Albert County Museum in Hopewell Cape, NB



*Hopewell Cape, NB E4H 3J8*

*3940 Route 114, Hopewell Cape, NB, Canada, Open 7 days a week, 9:30 AM - 5:30 PM. May Long Weekend until End of September.*

*General Admission: Adults: \$10.00, Seniors (60 and better): \$8.00, Students: \$8.00, Children under 5: free, Family: \$25.00*

**Is it worth a visit?** This is a truly historic site which marks the beginning of the petroleum industry. Since there are many other interesting sites in the area, add it to your list if you are in the area. Geologists and history buffs? This is a must visit!

## ABRAHAM GESNER - The man that started it all



Abraham Pineo Gesner, May 2, 1797 – April 29, 1864) was a Canadian physician and geologist who invented kerosene. Gesner was born in Cornwallis, Nova Scotia (now called Chipmans Corner) and lived much of his life in Saint John, New Brunswick. He died in Halifax, Nova Scotia. He was an influential figure in the development of the study of Canadian geology and natural history.

**Education** - Born to a well-established farming family in the Annapolis Valley, Gesner pursued a career at sea from a young age. Twice shipwrecked by his early twenties, Gesner returned to the family farm near Chipman Corner, northeast of Kentville. He married Harriet Webster, the daughter of Kentville's Dr. Isaac Webster in 1824, then went to London to study medicine at St Bartholomew's Hospital under Sir Astley Paston Cooper, then surgery at Guy's Hospital under John Abernethy. While in London, he became interested in geology, making the acquaintance of Charles Lyell.

**Early career** - Returning to Parrsboro as a practising physician, Gesner also pursued his passion for geology. In 1836, he published a study on the mineralogy of Nova Scotia, which included a detailed geological map providing information on the key deposits of iron ore and coal in Nova Scotia. In 1838, he was appointed Provincial Geologist for New Brunswick, charged with the mission to undertake a similar geological survey. In the course of this survey, in 1839 Gesner discovered the bituminous asphalt substance albertite, which he named after Albert County, New Brunswick where it was found.

In 1842, looking for coal, Gesner travelled to Quebec, where he discovered the first of the great fossil deposits of the future Miguasha National Park. However, little notice was taken of his report until the fossils were rediscovered in 1879.

In 1842, Gesner started "Gesner's Museum of Natural History", in Saint John, New Brunswick, the first public museum in Canada. The contents were later deposited in the New Brunswick Museum.

**Kerosene** - Gesner's research in minerals resulted in his 1846 development of a process to refine a liquid fuel from coal, bitumen and oil shale. His new discovery, which he named kerosene, burned more cleanly and was less expensive than competing products, such as whale oil. In 1850, Gesner created the Kerosene Gaslight Company and began installing lighting in the streets in Halifax and other cities. By 1854, he had expanded to the United

States where he created the North American Kerosene Gas Light Company at Long Island, New York. Demand grew to where his company's capacity to produce became a problem, but the discovery of petroleum, from which kerosene could be more easily produced, solved the supply problem.

Eventually, Gesner's company was absorbed into the petroleum monopoly, Standard Oil and he returned to Halifax, where he was appointed a Professor of Natural History at Dalhousie University.

Gesner himself was humble about his contribution to the development of the petroleum industry. In his Practical Treatise, he said that "the progress of discovery in this case, as in others, has been slow and gradual. It has been carried on by the labours, not of one mind, but of many, so as to render it difficult to discover to whom the greatest credit is due."

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(Modified from Wikipedia)

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