

Where Ice Once Crushed Ships, Open Water Beckons



The crew of the doomed Franklin expedition in an 1895 painting by William Thomas Smith. The men were trapped as they sought to navigate the Northwest Passage.

This month, as the luxury cruise ship Crystal Serenity completed its [pioneering transit](#) of the Northwest Passage, a **Canadian expedition announced the discovery of the Terror, a British ship that vanished along the same general Arctic route some 170 years ago.** For the Crystal Serenity, the [biggest luxury liner](#) ever to complete the passage, it was smooth sailing on waters that in the Terror's day were covered by sea ice so impenetrable that it trapped the ship and another British vessel as they sought a route across the top of North America. All 129 men on what was known as the Franklin expedition died. **A Doomed Mission** The icebound Northwest Passage trapped the two ships, the Erebus and the Terror, of Britain's Franklin expedition in 1845-46. All 129 men, including Franklin, perished, and the vessels sank.

INTRODUCTION: The purpose of this application is to find vector resultant from Alaska to the wreck of the Terror ship in northern Canada (see sketch below). A is the vector from Alaska to Northern Greenland: 2000 miles @ 53° North of East. Vector B is the vector from Northern Greenland to the wreck of the Terror ship just north of northern Canada: B is 800 miles @ 30° East of South.

QUESTION: Find resultant vector $A + B = R$. Find both magnitude and direction?

ANSWER: $R = \sim 1839$ miles @ 29.54° North of East

