

'Super-river' formed the English Channel

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Credit: Google Maps

(PhysOrg.com) -- A team of Anglo-French scientists studying sedimentary deposits in the Bay of Biscay have concluded that Britain and France were separated by a "super-river" during three periods of glaciations, and they have produced a more complete picture of the process of separation than previously available.

Approximately 500,000 years ago, south-east Britain was connected by a land bridge, near present day Dover, to the Artois region of northern [France](#). Then, roughly 450,000 years ago during a glaciation ([ice age](#)), water became trapped between the British and Fennoscandian ice sheets, and an enormous glacial lake was formed bounded by glaciers in the north and the land bridge in the south.

Many rivers fed into the lake (located under what is now the North [Sea](#)),

and it eventually burst its banks and flooded into the wide river valley, gouging through the soft chalk and taking sediment with it into the Bay of Biscay. The "super-river" is known to geographers as the *Fleuve Manche* (Channel River).

In the study, published in *Quaternary Science Reviews*, the researchers tested the sediments found at the sea bottom and identified three periods at which sediment was deposited by the Fleuve Manche. Their results show the super-river existed during three glaciations, approximately 450,000, 160,000, and from 90 to 30,000 years ago. In the interglacial warm periods the English Channel was filled with water and separated Britain from Continental Europe.

One of the project leaders, Professor Phil Gibbard of the Department of Geography, University of Cambridge, said they were the first to examine the sedimentary material left by the Fleuve Manche in the Bay of Biscay. Until the present study, the only data available to scientists was from sediments in coastal Europe, but many deposits have been eroded and are incomplete. The Bay of Biscay deposits have been undisturbed at the bottom of the sea for thousands of years, and give a much more complete picture than previously available.

Professor Gibbard said the study adds profoundly to the knowledge of how [Britain](#) was populated. During glaciations the sea level dropped sufficiently to allow people, plants and animals to cross from the Continent, until the glacial lake overflowed and the Fleuve Manche was formed. At this time the large amount of cold water entering the Bay of Biscay would also have affected sea currents and the environment of the time.

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