

Bjarni

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IV.

HARMONIZED VOYAGES EXPLAINED

Grænlinga Saga & Eirik's Saga – Skálholtsbók & Hauksbók

1.

Bjarni Herjolfsson's Voyage (Random sighting of Vinland)

Summer, y. 985 or 986 AD

Δ **01/VD01/BH:** Bjarni Herjolfsson was a merchant. His father Herjolf Bardarson lived in Iceland. Bjarni spent winters alternately abroad and with his father in Iceland. One summer Bjarni arrived with his ship at Eyrar, in Iceland, and found out that the same summer his father had left Iceland for Greenland, with Eirik the Red. His plan was to settle there. Bjarni decided to sail to Greenland (G p. 51, 52) (S p. 78).

► **01RH/VD01/BH:** Eirik the Red went to settle Greenland in the summer, in either the year 985 or 986. He was accompanied by other people from Iceland, including Bjarni's father, Herjolf Bardarson (G p. 51, 52). Eyrar is on the east coast of Iceland.

<http://www.satelliteviews.net/cgi-bin/w.cgi?c=ic&UF=-2643679&UN=-3651417&DG=PPL>

Δ **02/VD02/BH:** Bjarni set off on a voyage from Eyrar, in Iceland, to Greenland. None of his crew had ever sailed to Greenland before. It took them a 3-day voyage to lose sight of Iceland below the horizon (G p. 52).

► **02RH/VD02/BH:** Eirik the Red left Greenland past Snaefells Glacier (Snaefellsjökull – 64°48'N 23°47'W) which reaches height of 1,446 m or 4,744 ft. and is located on Snaefellsness peninsula on the west coast of Iceland. He sailed due west approximately on 65th parallel until he got near 1,829 m or 6,000 ft. high Mid Glacier (MP p. 50) located in Angmagssalik region (probably Ingolfsfjeld) on the east coast of Greenland. Then he turned south and sailed around Cape Farewell (59°46'23"N 43°55'21"W) on the southern tip of Greenland. This western course between 2 glaciers as landmarks became regular sailing route until 14th century (MP p. 17, 18, 50, 114).

In 12th century, it took a 4-day voyage from Snaefellsness in Iceland to Cape Farewell in Greenland (MP p. 15, 16). The distance between Snaefellsness, Angmagssalik and Cape Farewell is c. 1,425 km, or 769 NM, or 885 miles. The average speed of a Norse ship would have to be c. 14.8 km/h, or 8 NM/h (knots), or 9.2 mph in order to overcome this distance in 4 days. (The maximum speed of Norse ships was 10 knots = 10 NM/h = 18.52 km/h = 11.51 mph.)

It is reasonable to conclude that when Bjarni sailed to Greenland in y. 985 or 986, he took Eirik's western course approximately on the 65th parallel with Snaefells Glacier as his landmark on west coast of Iceland. It took Bjarni a 3-day voyage to lose sight of Iceland below the horizon. The reason is that Bjarni sailed first from Eyrar on the east coast of Iceland, and he had to sail around Iceland in order to get to Snaefellsness on the west coast of Iceland. Only then he could sail to Greenland.

<http://en.wikipedia.org/wiki/Sn%C3%A6fellsj%C3%B6kull>

<http://en.wikipedia.org/wiki/Snaefellsnes>

<https://maps.google.cz/maps?q=snaefellsnes+iceland&ie=UTF-8&hq=&hnear=0x48d57782179b6fa7:0x8d6ea67fc69c13ff,Snaefellsnes&gl=cz&ei=ZqFNU9WmKIPk4wSrsIGICQ&ved=0CKcBELYDMA8>

<http://en.wikipedia.org/wiki/Angmagssalik>

http://en.wikipedia.org/wiki/Cape_Farewell,_Greenland

Δ **03/VD03/BH:** Then a favorable wind was replaced with northerly winds and fog. For many days they did not know their course. After that, they could see the sun again. They hoisted the ship's sail. It took them a 1-day voyage to sight land number I. They sailed near land number I. The country was not mountainous but had low hills and was well wooded. This land was different from Greenland. They turned to the sea again and left land number I on the port quarter. It took them a 2-day voyage to sail from land number I until they sighted land number II (G p. 52, 53).

► **03RH/VD03/BH:** In the beginning of his voyage, Bjarni was sailing from Iceland in the east, due west toward Greenland. Then he lost his course because of bad weather. After he could see the sun again he was able to redetermine west and east directions. Not knowing the position of his ship, he possibly continued in his original western course toward Greenland. After a 1-day voyage, he sighted land number I (later part of Vinland) in the west. It was not the coast of Greenland with its huge glaciers, but the coast of a well wooded, unknown land. Because of the vegetation, Bjarni could not be west or north-west of Iceland. He could be only somewhere south-west of Iceland. The only land at which he could be was the east coast of the North American continent.

After sailing near land number I for some time, **they left** land number I (later part of Vinland) **on the port quarter** (the left rear of the ship) **and sailed for 2 days** from land number I, before they sighted land number II (later part of Markland). This indicates that Bjarni had land number I, which was west of his ship, on the port side (left side of the ship) before he turned to the sea again and left land number I on the port quarter. Therefore he had to be sailing in a northerly direction alongside land number I, before he left it on the port quarter. Leaving land on the port quarter indicates sailing in a north-east direction from land number I, toward the anticipated location of Iceland.

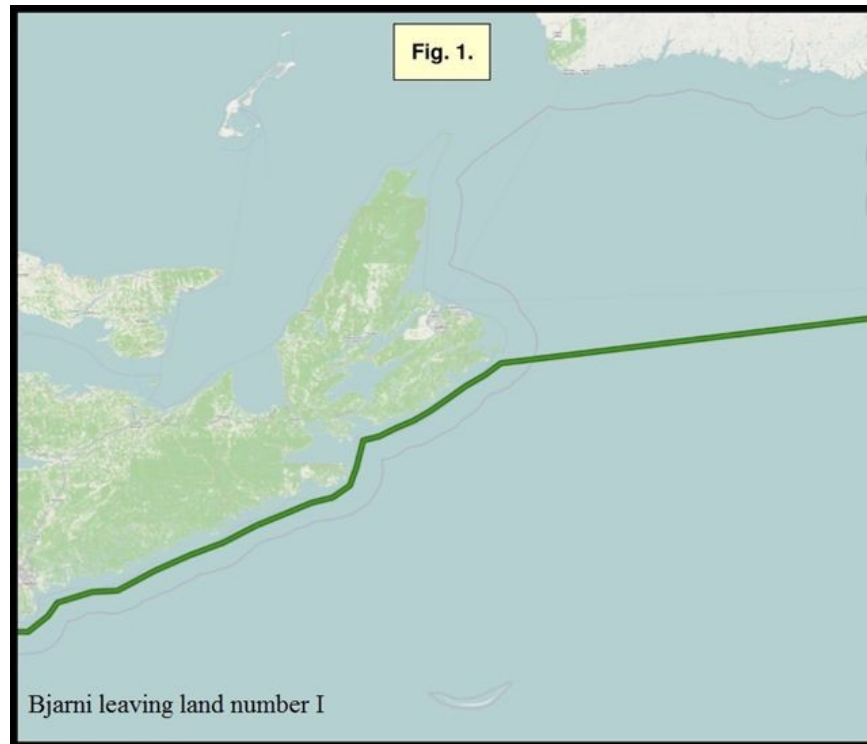
Regardless where Bjarni left land number I on the port quarter, he had to sail through a section of sea in a north-east direction in order to be able to get to nearby land number II. Nova Scotia is the last land one can leave on the port quarter of the ship when sailing up the east coast of the North American continent, before coming to a section of sea separating it from nearby Newfoundland Island in the north-east.

Considering maximum speed of Norse ships, Bjarni could not make more than c. 889 km, or 480 NM, or 552 miles in 2 days, which is just a bit longer distance than the distance from Cape Sable Island, Nova Scotia in south-west to Point May, Newfoundland Island in north-east. **Therefore leaving land number I (later part of Vinland) on the port quarter means that Bjarni sailed from no farther than Nova Scotia, north-east toward Newfoundland Island.**

http://en.wikipedia.org/wiki/Cape_Sable_Island

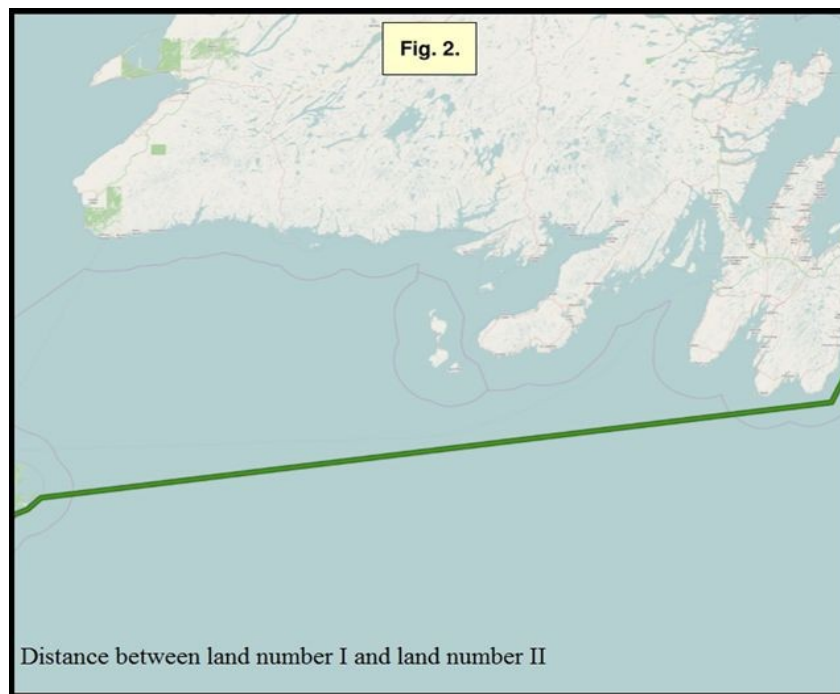
http://en.wikipedia.org/wiki/Point_May

≈ Fig. 1. Bjarni leaving land number I (possible route)



► **04RH/VD03/BH:** The shortest distance between the east coast of Cape Breton Island, Nova Scotia, and the south-east coast of Newfoundland Island is a distance of c. 506 km, or 273 NM, or 314 miles. It would require Bjarni to sail on average c. 10.5 km/h, or 5.7 NM/h (knots), or 6.6 mph in order to overcome this distance in 2 days. Bjarni probably did not have to sail that far before he sighted Newfoundland Island.

≈ Fig. 2. Distance between land number I and land number II (possible route)



► **05RH/VD03/BH:** In order that Bjarni, after sighting land number I (later part of Vinland), could sight only 2 more lands (later Markland and Helluland) before coming to Greenland, his land number I which he left on the port quarter of the ship could be no farther land than **Nova Scotia**. The only land number II to which he could arrive, in order that he could sight one more land (later Helluland) before coming to Greenland, was **Newfoundland Island**. Considering Bjarni's north-east course plus maximum distance he could sail in 2 days and similar maximum distance between Nova Scotia and Newfoundland Island, land number I sighted by Bjarni had to be **Nova Scotia**.

► **06RH/VD03/BH:** The east coast of Nova Scotia is not mountainous. It has low hills and is well wooded.

► **07RH/VD03/BH:** Land number I (later part of Vinland) that Bjarni left on the port quarter of his ship, was Nova Scotia, and land number II that Bjarni sighted was Newfoundland Island (later part of Markland).

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