

ATTACHMENT A

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Over 275 years ago, the first ship on the Great Lakes disappeared without



Remains of the wreck on Mississagi Strait, Manitoulin Island, as they appeared in 1937. All trace of what seems to have been the *Griffin* has since disappeared.

trace. Perhaps her bones lie here.

BY GEORGE R. FOX

WAS THIS LA SALLE'S 'GRIFFIN'?

ON September 18, 1679, La Salle's fur-laden *Griffin*, first ship on the Great Lakes, weighed anchor at the outlet of Green Bay, Lake Michigan, and sailed off into oblivion. No one knows what happened to her. But almost exactly two centuries later, an old wreck was found on Manitoulin Island which the most careful study indicates was the remains of this famous ship. It lay a mile north of Mississagi Light where it was nearly covered with rubble thrown over it by the seas. W. A. Grant, who later became keeper of the light, first saw the wreck in 1898. This article is an attempt to determine its identity, in the light of all available evidence.

First, what type of ship did La Salle build? In 1678, in France, he recruited ship carpenters, pit sawyers, adze men, caulkers, a blacksmith, and labourers. These men from Normandy and Flanders could build only the kind of craft their training had taught them to construct, and the dominant type of that place and period was the *galliot*. A copper plate engraving, "The building of the *Griffin*," published in Amsterdam in 1704, showed by comparison with the figures of men working on her, a *galliot* of less than 60 feet in length.

Such vessels were used in the North Sea and the English Channel and were built up to 500 tons. But L. Denoux, a noted naval archaeologist of Paris, indicates that smaller ships, of 45 to 50 tons, could be handled by a crew of five and were more economical to operate. These craft were less than 60 feet long and were about 20 feet wide.

In his book *La Louisiane*, Father Hennepin meagrely describes the *Griffin* as a ship of about 45 tons "which we might call an ambulant fort." He changed this to 60 tons in *A New Discovery*, but in any event she could not have been large.

The galliot had no deep keel to keep her on course when sailing into the wind. The keel, usually 12 by 12 inches, was for stiffening the hull and for support when the ship was resting on bottom in shallow water at low tide. On each side of this keel, seven or eight feet out at the turn of the bilge, were the grounding keels.

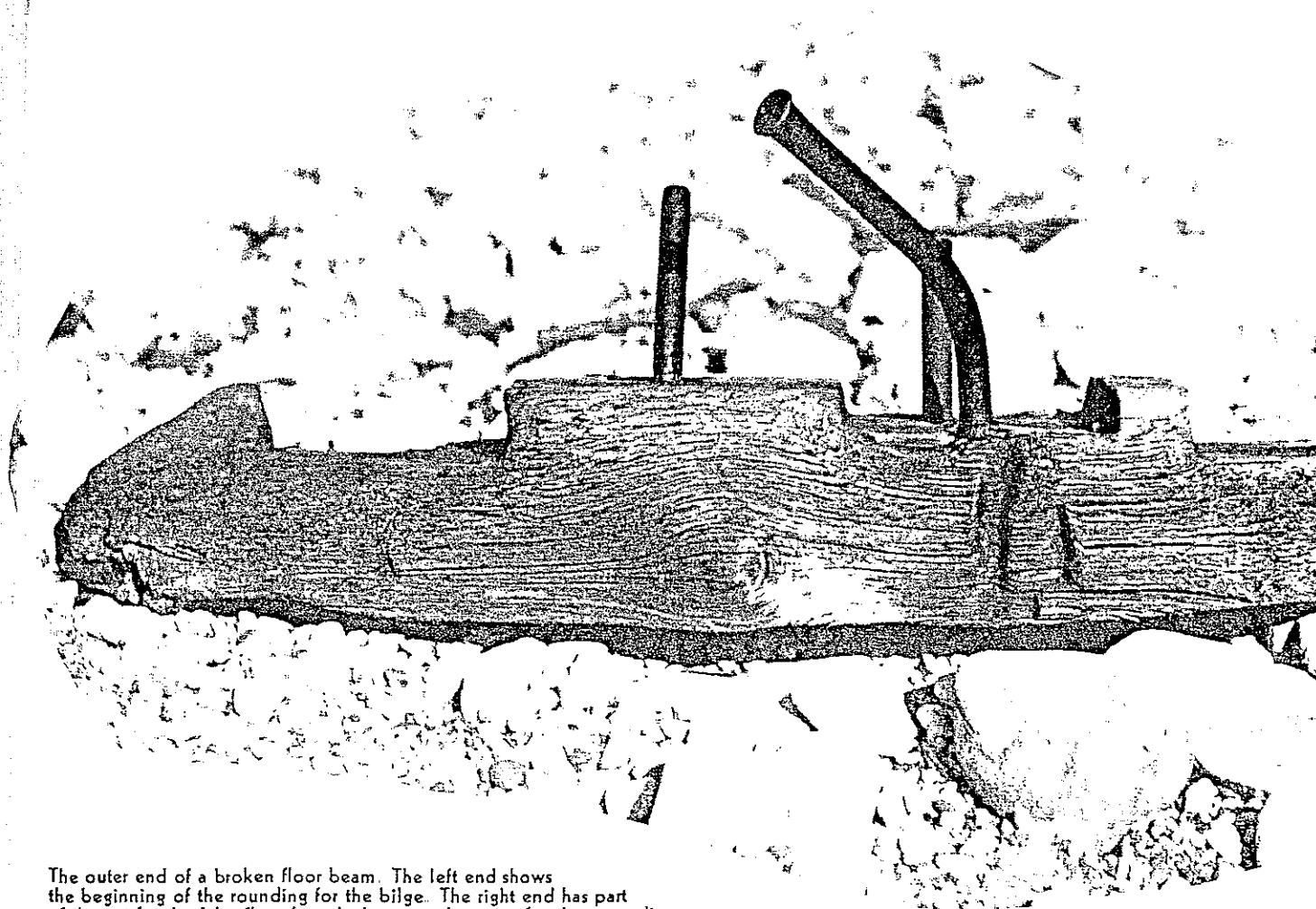
The remains of the old wreck, as first seen by keeper Grant, were not over 30 feet in length and between 15 and 20 feet wide. The stem and stern were missing, as were the sides and upper part of the vessel. The bottom was flat and nearly covered with gravel. Later, when waves had exposed the timbers, only the bottom planks, floors, and keelsons remained. The 36-inch bolts which had held the keelsons, floors, and keel together showed that the missing keel had been 12 inches deep. While no grounding keels were found, cuts made in the underside of the floors to attach them to the hull were in evidence, as were the bolts that once fastened them in place. In shape, all of these members, as well as wide cuts indicating the use of a false floorboard on each side of the keel, were much like those of a galliot.

The wreck on Manitoulin impressed all who saw it with

its fine workmanship and the huge size of the timbers. Commander Eugene F. MacDonald, Jr., of Chicago, on whose advice I visited it in 1937, described it as "a hull built as I never saw a hull built before."

Captain T. J. Batman, of Sheguiandah, Manitoulin Island, examined the remains in 1930, with Roy F. Fleming, Toronto historian. He considered the keelsons heavy enough for a Great Lakes trading schooner of 300 to 400 tons. He suggested that such huge timbers in a ship of this size indicated that its builders were accustomed to ocean standards.

Measurements taken by Fleming in 1930 show that the bottom remaining at that time was about 30 feet long and 15 feet wide. There were two keelsons, each a foot square and about an inch apart, with no space for a centreboard. These figures, and others which I obtained in 1937, were sent to Denoix in Paris. He determined that the vessel measured a bit less than 60 feet in length, about 16 feet in width, and seven feet in depth. She would have drawn six or seven feet of water, which corresponds to a displacement of some 60 tons. This displacement was adequate for safe navigation on the lakes and had no relationship



The outer end of a broken floor beam. The left end shows the beginning of the rounding for the bilge. The right end has part of the cut for the false floor board; the second cut was for the grounding keel. When in position in the ship, the upper side as shown here was down.

to the weight of the cargo. The shape of the boat would have necessitated a permanent ballast of 10 to 20 tons to obtain stability.

Other details offer possible clues to the time of construction. All investigators of the wreck have noted that trenails (wooden pegs) were not used. In the 17th century the British were using trenails in ship building, but the French were not. A French regulation of 1673 required that "Ships will be iron-pegged in the junction of the principal beams while wooden pins are to be used everywhere else." Denoix states that French shipbuilders paid no attention to these instructions and continued to use iron nails and bolts as late as 1800. Users of the French method appear to have built the ship whose wreck lay on Mississagi Passage.

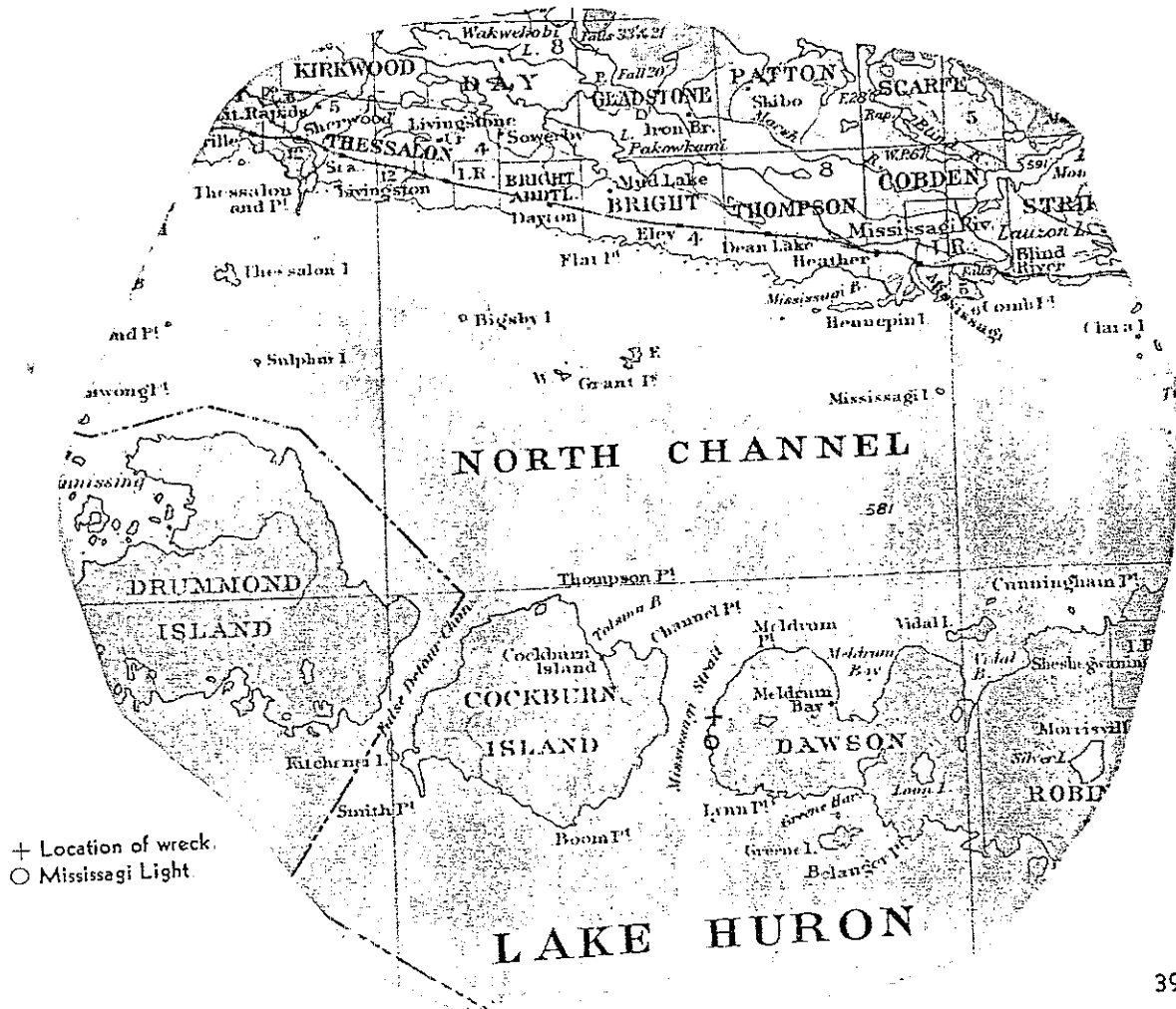
Further evidence pointing to a definite period comes from the iron in bolts, spikes, nuts, and washers taken from the timbers. In 1931, Fleming sent a bolt to the National Academy of Arts and Trades, in Paris, for study and analysis. While giving no date, the report found that "It presents all the early characteristics of a piece of iron manufactured by a process in use in France before the 18th Century." One end of the bolt bore irregular threads, noticeably squared, and a screw nut strongly suggesting the crude, hand-crafted iron work of the 17th century.

Such threads were produced by forcing a metal nut onto the bolt to rough-hew it, then finishing the work with lime.

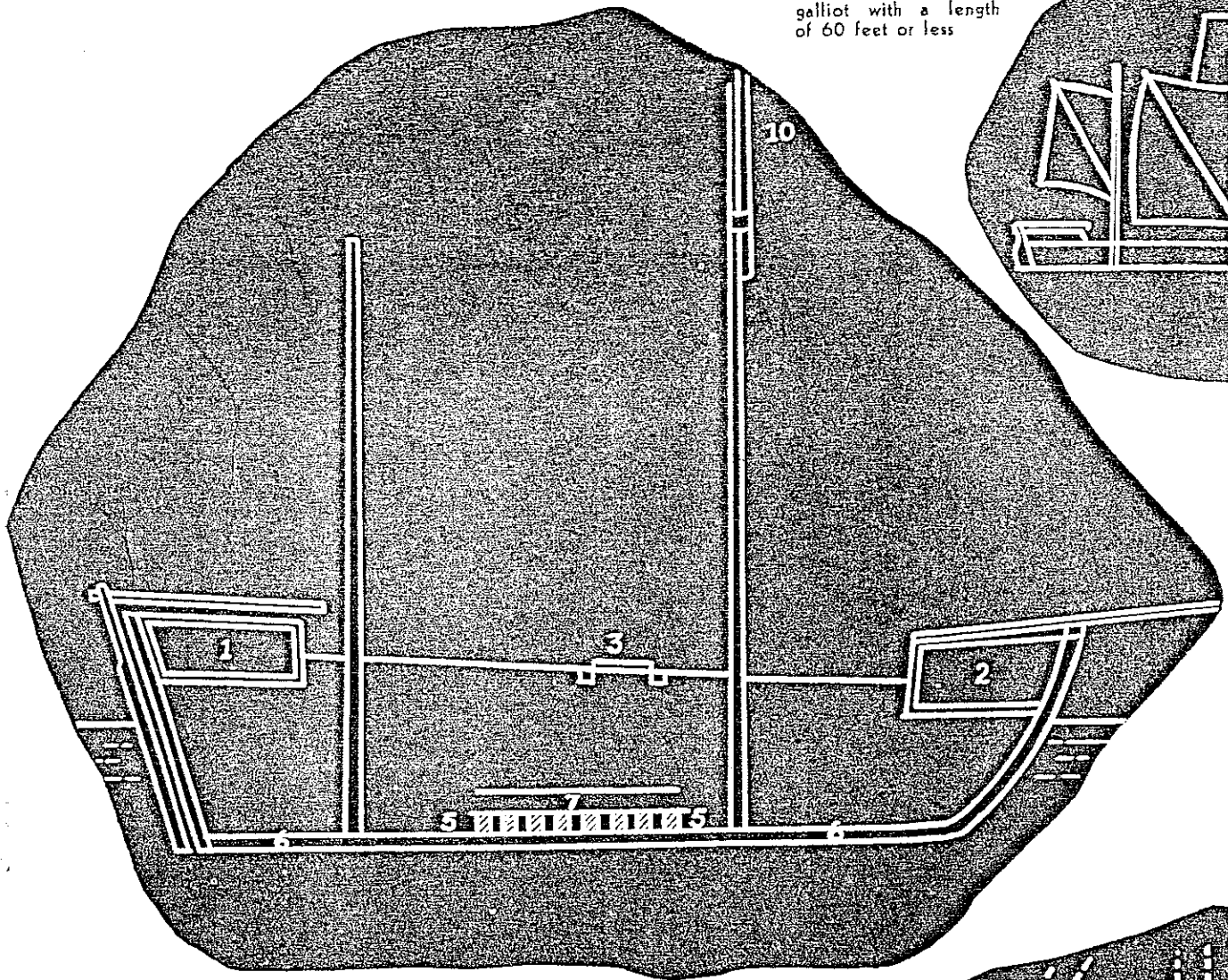
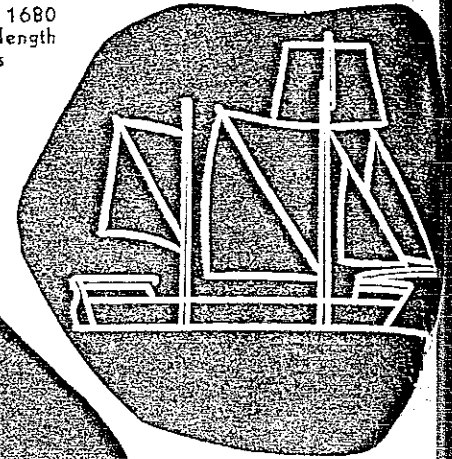
Relative to iron making at that time, the same authority stated that the refining fuel was mixed with the ore in a process which left sulphur in the metal. Chemical analysis revealed 0.025 per cent sulphur in the iron specimens, an amount about average for the period in question, when smelting was by the use of wood, rather than coal or coke. Commander MacDonald had other analyses made, and all agree that the iron was made by a process in use in the 17th century or before. Its content of phosphorus proved to be high (0.0235 per cent), dating the bolt before the process of eliminating phosphorus was known.

Early visitors saw iron fastenings in all parts of the wreck, but few of them remained in 1937. Frank H. Myers, of Shaker Heights, Ohio, probably has furnished the explanation for this. In 1915, as President of the Manitoulin Historical Society, he called together descendants of the pioneers of the island to learn what they recalled about this wreck on Mississagi. Among other things he was told that early settlers chopped the timbers to pieces to get the iron spikes for harrow teeth.

Grant Turner, of Little Current, has one of the spikes in his collection. It is 10 inches long, hand cut from a square bar, and has a very small head. All of the spikes



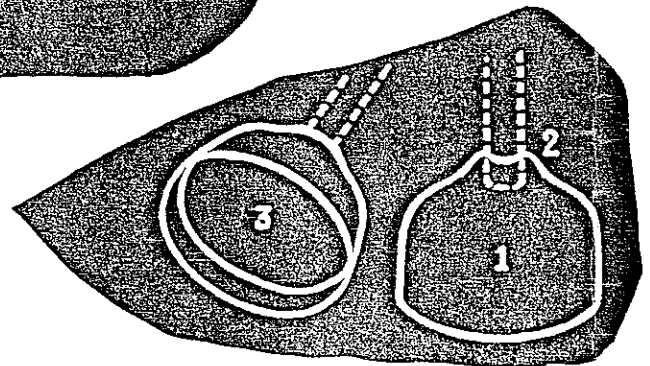
Sails used on a 1680
galliot with a length
of 60 feet or less



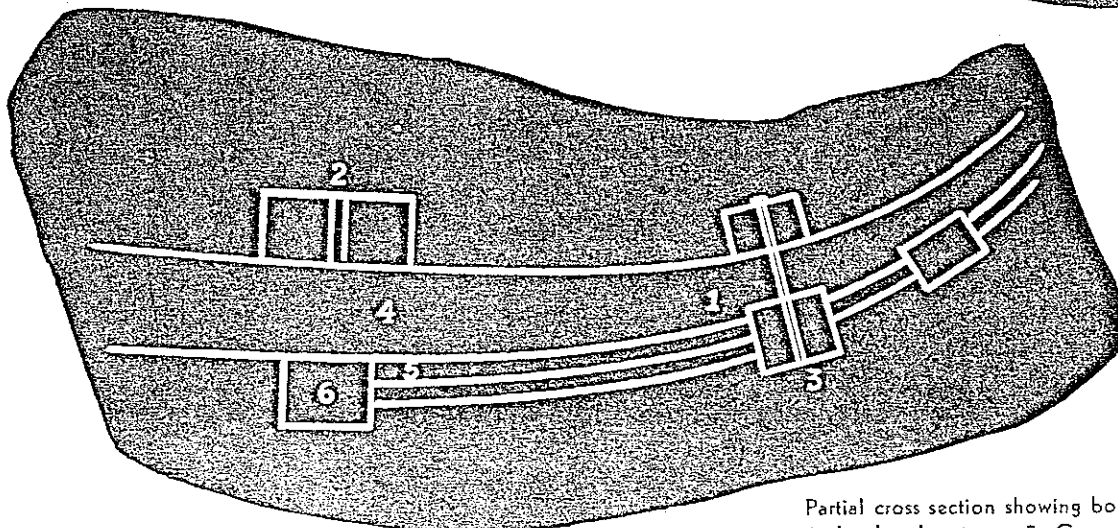
Side view of a galliot larger than the *Griffin*

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| 1. Captain's quarters. | 5. Floor, each 1' x 9" |
| 2. Room or galley | 6. Keel, 1' square. |
| 3. Hatch. | 7. Keelson, 2' x 9" |
| 10. Main mast carried top mast for small square sail. | |

After drawings by L. Denoix, French naval archaeologist



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| 1. Lead swab or ram found at wreck |
| 2. Place for handle |
| 3. Bottom of swab, diameter 3 1/2" |
- From drawings by R. F. Fleming



- Partial cross section showing bottom construction of a galliot.
- | | | |
|--------------------|--------------------|----------------------|
| 1. Insulated part. | 3. Grounding keel. | 5. False floor board |
| 2. Keelson | 4. Floor (beam). | 6. Keel |

were blunt and appear to have been cut off with a diagonal stroke. Driving them must have been difficult and the head probably resulted from the strength of the blows used. The smallest spikes were four inches, the majority about eight inches, and the largest 16 inches "The iron nails with small heads," explains Denoix, "are the classical broadside nails. The head was small in order to get lost in the broadside and permit its planing. A thickness of three inches in depth is normal; also its fixation by nails of 6 or 8 inches."

The most puzzling feature of the wreck is the lead found in it. In an article in *Ontario History* (1952), C. H. J. Snider, of Toronto, indicates that in early days the Indians obtained lead there for bullets and for sinkers used on their nets. Later, the whites also used it for net weights. Only a few pieces of the lead are known today, and Light Keeper Grant is the only person now living who noted how it was used in the ship. He states that it was in the seams, which were about a quarter of an inch wide. The lead was V-shaped or U-shaped, underlain by what might have been oakum, and it originally could have been held in place by wooden wedges. Fleming, too, observed "lead . . . caulked into the seams about a quarter of an inch wide, with no signs of pitch."

Was lead ever used by American shipbuilders? C. L. Douglas of Bath, Maine, a recognized authority, writes that so far as he knows lead was never used for caulking in this country. On this point Fleming queried the Smithsonian Institution, the Marine Research Society of Salem, Massachusetts, and the Marine Department of Canada. None found in their extensive libraries any reference to lead being so used in America.

But he found that in Europe lead had been employed as caulking material. One reference mentions its use in a Swedish ship in 1544, and Denoix described the use of lead in caulking galliots of 200 years ago. The lead was laid along each side of the seam and a wooden wedge driven between.

The grounding keels carried by the wreck are another evidence of construction at a time when their use in Europe was common. The ship's builders used them since their training demanded it. Before 1760 on the Great Lakes, only the French could have built sailing craft. After that date the British took over. Their ships were schooners and sloops, which were launched and had no landing keels.

Ring counts of the wood itself failed to establish any date. Cellular examination has shown that the white oak could have been cut on the Niagara Peninsula, but the evidence is not conclusive.

How long has this wreck lain on the Manitoulin shore?

William A. Grant saw it first in 1898. It was there when his father came to the island some years earlier. Grant heard John Francis, a nonagenarian Indian, tell that it was there during his boyhood. Francis' father, who lived to be ninety, told John that it was there when he, too, was a lad. "Before my time," he related, "it had always been called the white man's ship."

John Francis' memory places the wreck there about

1810, and the recollection of his father pushes it back another generation to somewhere between 1780 and 1790. The *Griffin* was the only ship used by the French on Lake Huron.

If the ship timbers on Manitoulin were not those of the *Griffin*, they must have been those of an English vessel built between 1761, when the British launched two small vessels in Lake Erie, and 1790 when we may presume the wreck already existed. The British evacuated the region in 1796, and until then it is doubtful that they had more than 100 ships above Niagara. The point of significance is that English craft were very different from the galliot type of the late 1600s. Only the finding of parts of the wreck beneath the waters of the Passage can definitely answer the question of how the stem and stern were built.

Keeper Grant is convinced that the superstructure of the ship and perhaps her anchors and cannon are at the bottom of Mississagi Passage off the spot where the timbers lay. Some time before 1930, F. James, a commercial fisherman, anchored his 70-foot tug in the Passage opposite the wreck. When he tried to raise his hook, it would not come. Using all the tug's power and nearly pulling her bow out, he finally brought the anchor up. One fluke had broken, and on the other was part of a wreck that slipped off and sank.

Other finds from these depths could prove or disprove that this wreck is the *Griffin*. If an anchor chain is found which belongs to it, then the ship was not La Salle's. Denoix says that anchor chains were not used prior to 1830.

Hennepin's diary reports that she carried five guns, two of which were brass. No cannon have yet been found, but shortly before the turn of the century, Keeper Grant found at the wreck two lead objects similar in shape to the rubber cup mounted on a handle which is used for opening clogged drains. One still had a part of the handle attached. These were identified by two men who had served in the British Navy as rams or swabs for loading a cannon and cleaning it after firing. Each had a diameter somewhat less than three inches.

A number of these clues from the wreck seem to substantiate the theory that the timbers are from La Salle's *Griffin*: the characteristics of the white oak of which she was built; the huge size of her timbers; the size of the wrecked ship being almost identical with the *Griffin*; the flatness of the bottom and the presence of grounding keels; the absence of trenails; the hand-made broadside nails; the long iron bolts, the nuts, and the old method of threading; the sulphur and phosphorus in the iron; the use of lead in caulking; and the known length of time the wreck lay in Mississagi Passage.

Unless it can be shown that—on the upper Great Lakes before 1790, someone built a ship of about 60 tons, with grounding keels, using white oak similar to that of the Niagara region, with bolts threaded by the 17th century method and with bolts and spikes of iron containing two to three hundredths per cent sulphur and phosphorus, without trenails, and with lead for caulking—

Then this wreck is La Salle's *Griffin*. ♦