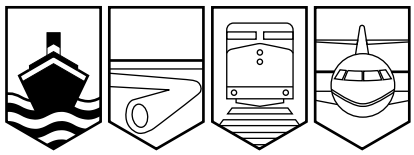
Transportation Safety Board of Canada

Bureau de la sécurité des transports du Canada

MARINE INVESTIGATION REPORT

M99W0095



CAPSIZING WITH LOSS OF LIFE

OPEN SPORTS FISHING VESSEL

MARABELL 8

WEST SIDE OF LANGARA ISLAND, BRITISH COLUMBIA

29 JUNE 1999

Canada

Marine Investigation Report

Capsizing with Loss of Life

Open Sports Fishing Vessel *Marabell 8* West Side of Langara Island, British Columbia 29 June 1999

Report Number M99W0095

Summary

Shortly after daybreak on 29 June 1999, while away from the mother ship *Marabell* and operating in heavy swells off the southwest side of Langara Island, British Columbia, the open sports fishing boat *Marabell 8* capsized, throwing the two occupants into the water. The operator drowned. The other person, who managed to board the capsized hull, was successfully rescued some two hours after the accident.

Ce rapport est également disponible en français.

Other Factual Information

	Marabell 8	*Marabell*
Port of Registry	n/a	Victoria, British Columbia
Flag	Canada	Canada
Registry/Licence Number	30KA8241	179625
Type	Open sports fishing boat	Mother ship for sports fishing operation
Gross Tonnage	n/a	316
Length[1]	5.2 m	39.3 m
Built	1997, Edgewater, Florida	1943, Newport Beach, California
Propulsion	Outboard engine, 70 horsepower	Twin marine diesels, 1000 horsepower
Number of Crew	0	7
Number of Passengers	2	13
Registered Owner	Oak Bay Marine Group, Victoria, British Columbia	Sealand of the Pacific Ltd., Victoria, British Columbia

Description of the Vessels

Marabell 8 is a 5.2 m open sports fishing boat, constructed of non-absorbent buoyant polyurethane foam sandwiched between external and internal layers of glass-reinforced plastic (GRP). The trihedral hull has a centre "V" and port and starboard hard chine units which enhance transverse stability. The hull is arranged with a forward, built-in locker, where distress flares are stowed, and two pedestal-mounted GRP swivel chairs—one to port and the other to starboard. A third swivel chair is fitted to starboard near the stern. From this position, the operator controls the boat's course and speed with the tiller arm of a 70-horsepower outboard motor secured to the transom stern. A very high frequency (VHF) radio transceiver is fitted beneath the frame of the operator's chair. A United States Coast Guard small craft decal was secured to the hull of the *Marabell 8*.

The *Marabell* is a converted hydrographic survey vessel of wood construction. The boat deck consists of an extensive foredeck leading to a raised wheelhouse followed by accommodations and lounges. The after portion of the boat deck consists of a small exterior area surrounded by stanchions and handrails. The weather deck consists of accommodation spaces, an after saloon, a galley, and a stowage area.

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[1] Units of measurement in this report conform to International Maritime Organization standards or, where there is no such standard, are expressed in the International System of units.

Photo 1. *Marabell 8* in Henslung Cove, Langara Island, British Columbia, on 30 June 1999

The *Marabell* is anchored each year in Henslung Cove, Langara Island, British Columbia, between mid-May and the end of July. It provides accommodation for paying guests who participate in sport fishing for salmon, halibut, and cod. At the time of the accident, a floating dock was secured to the port side of the vessel and was used as a moorage site for 13 small fishing boats, one of which was the *Marabell 8*.

History of the Voyage

At approximately 1300 on June 28, two friends living in Colorado, U.S.A., arrived by seaplane at the *Marabell* for a sports fishing vacation. After settling in their cabins, they, with 10 other guests, participated in a 30-minute orientation meeting which provided information on the operational and safety features of the small boats.

By approximately 0500 on the following day, June 29, they ate breakfast in the main lounge, after which each donned a company-supplied, weather-protective garment known as a full-length coverall personal flotation device (PFD) suit. They then made their way to the moorage dock. One of the guests asked an employee if it was advisable to make passage to fish in the area of Lacy Island and was told that it was. At approximately 0515, the two guests boarded the *Marabell 8* and departed for Lacy Island via McPherson Point and St. Margaret Point. They chose this route because they determined, from their own observations, that it provided more protection from rough seas than the more direct route via Parry Passage. From the time the boat left the dock until the accident, some 75 minutes later, the same person operated the outboard motor while the other remained seated in the chair on the port side midships.

At approximately 0545, they arrived in the vicinity of Lacy Island and cast their fishing lines in the water. Before long, they found that the rain, southerly winds and large waves combined to make fishing very uncomfortable. At approximately 0605, they reeled in their lines and began a passage back to *Marabell* by following a course through the exposed waters of Parry Passage. At approximately 0630, in the vicinity of Swanton Bank, the boat was making a speed of approximately 12 to 15 knots when a large wave struck its starboard side. The boat capsized, throwing both of the occupants into the sea.

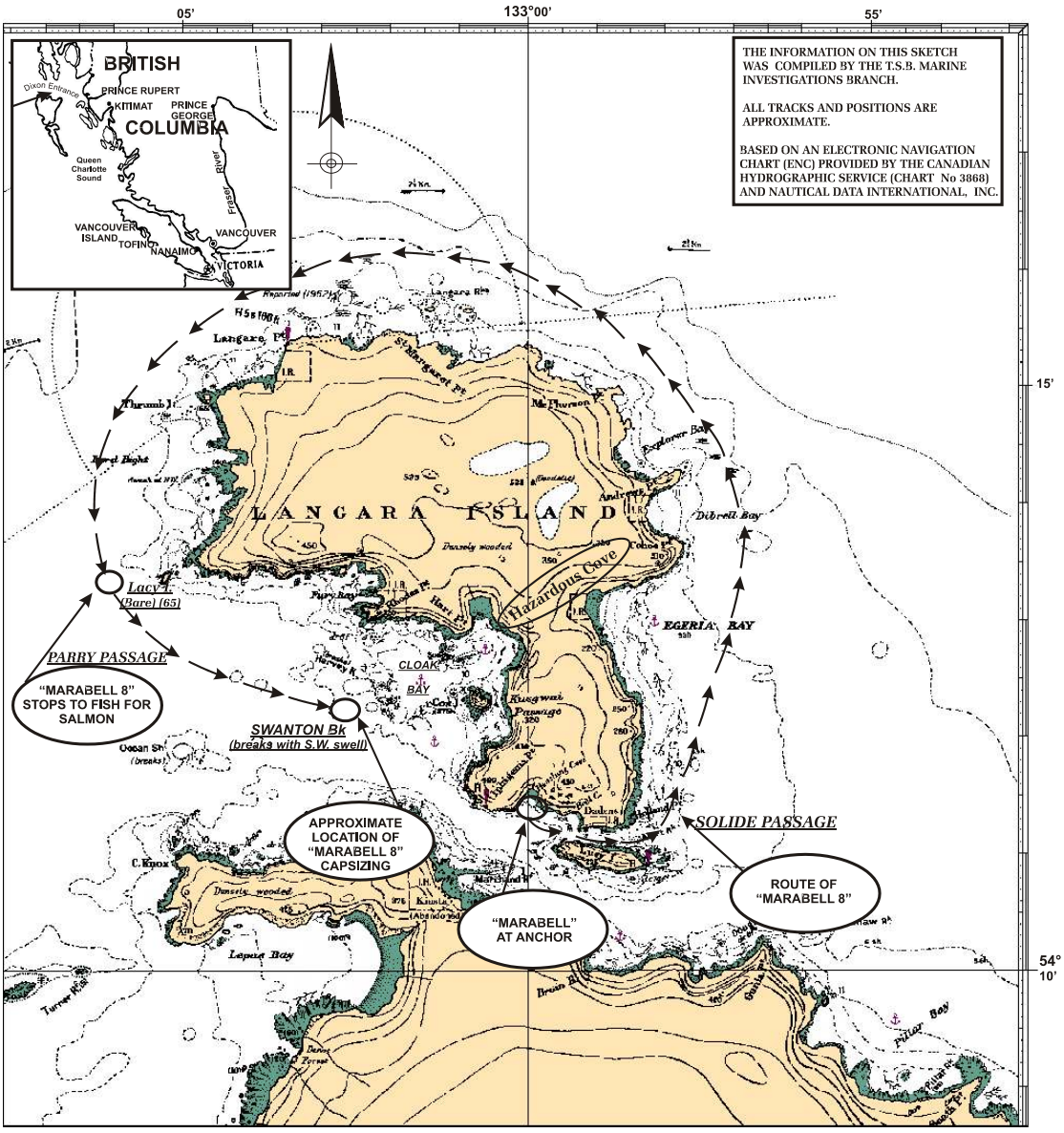

Figure 1. Langara Island, British Columbia, showing the route of *Marabell 8* on 29 June 1999

The occupant, who had been seated amidships, surfaced. Although the seas were rough, he was able to swim a short distance to, and climb atop, the now-overturned hull of the *Marabell 8*. From his position, he saw the boat's operator some distance away, floating face-down in the

water. Some two hours later, his arm-waving attracted the attention of two occupants of a small fishing boat (the rescue boat) passing by; the rescue boat did not originate from the *Marabell.* The rescue boat made a cursory check on the person in the water and then transported the lone survivor to the *Marabell,* where he was successfully treated for mild hypothermia. An inflatable boat, with three persons aboard, was then dispatched from the *Charlotte Princess,* which was anchored near the *Marabell.* Those aboard the inflatable recovered the operator from the water and took him to the *Marabell,* where he was pronounced dead by the Provincial Coroner from Masset, British Columbia. An autopsy later revealed that the cause of death was drowning.

Damage to the Vessel

Damage to the *Marabell 8* was minor and included the following:

- The VHF transceiver sustained seawater damage.
- The swivel chair, located amidships on the starboard side, and two plastic portable fuel tanks were missing.
- The left side of a horizontally mounted aluminum bracket attached to the outboard motor was bent upward. (The bracket was part of a mechanism used to maintain a steady course while trolling for salmon.)

Certification - Vessels

Marabell 8

The *Marabell* was engaged in a commercial activity where the guests purchased a package deal comprised of room and board on board the *Marabell* and the use of *Marabell 8* for sport fishing/ recreational activity. Transport Canada (TC) considered the *Marabell 8* to be a pleasure craft and was, therefore, subject to the requirements of the Small Vessel Regulations as applicable to pleasure craft. The *Marabell 8* was not inspected by TC, nor was there a regulatory requirement to do so.

Marabell

The *Marabell* was certificated in accordance with the *Canada Shipping Act* for the trade in which the vessel was engaged and the area of operation.

Personnel History

Previous Sports Fishing Trips

Both the operator and the survivor had been guests of the same sports fishing company on two previous occasions: in June 1994, when they stayed aboard the *Marabell* in Henslung Cove for five days, and in June 1997, when they stayed aboard another of the company's vessels anchored at the head of Rennell Sound on the west coast of the Queen Charlotte Islands for five days. The operator of the *Marabell 8* did not have proof of competency in operating a boat, nor was he required to by regulations. The operator was not considered to have been an experienced boat handler. No guide was available, nor was one provided.

Certification of the Master of the Marabell

The master of the *Marabell* holds a valid 350-ton Home Trade Certificate. At the time of the accident, he had been in command of the vessel during five consecutive sports fishing seasons, beginning in 1994.

Safety Equipment

The *Marabell 8* carried life-saving equipment in excess of that required by regulations. Two approved lifejackets were stowed in the forward storage locker, together with six pyrotechnic distress flares and a waterproof flashlight.[2] In addition, each of the two persons on board wore a full-length coverall PFD, provided by the operator of the sports fishing facility.

Safety Measures Taken by the Master of the Marabell

The master of the *Marabell* routinely informed newly arrived guests of the safety equipment aboard the small fishing boats and advised them of local navigational hazards, such as prominent areas of kelp. In addition, each evening he ensured that the next day's Environment Canada marine weather forecast for Langara Island was posted near the top of the gangway on the port side of the exterior deck, near the entrance to the main lounge.

Geographical Information

Langara Island is located at the southern demarcation point between the open waters of the North Pacific Ocean and Dixon Entrance. It lies approximately 30 miles south of Cape Luzon, Alaska, and less than half-a-mile north of Graham Island, British Columbia., across Parry Passage.

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[2] *Small Vessel Regulations, Part II - Requirements for Pleasure Craft*

Swanton Bank is an area of relatively shallow water on the north side of Parry Passage. A description of Swanton Bank is found in paragraph 170 of the *Sailing Directions - British Columbia Coast (North Portion)* Volume 2, 12th edition, which states: "with a heavy SW sea and swell it breaks heavily and the rollers almost reach Hazardous Cove."[3] An inscription on the Canadian Hydrographic Service chart 3868 reads: "breaks with S.W. swell".

Weather Forecast and On-scene Weather

At 0400 on June 29, the Weather Centre of Environment Canada forecast for Langara Island was for southerly winds of between 15 and 25 knots and seas of between three and four metres.

The sun rose at 0521. About an hour later, at the time of the accident, wind and sea conditions were consistent with those forecast, and with rain and fog patches.

Current Information

The *Canadian Hydrographic Service Tide and Current Tables*, Volume 6, indicate that, on the morning of June 29, high water at Solide Passage, approximately three miles from Swanton Bank, was predicted to be 4.54 m above chart datum at 0152. Low water was predicted to be 0.79 m at 0845. At the approximate time of the occurrence, 0625, the tide was ebbing and the current was estimated to have been setting in a southwesterly direction at a rate of one to one-and-a-half knots.

Analysis

Weather and Boat-handling Ability

Weather forecasts are important aids in planning a safe passage through waters where high waves and strong winds are common. In this instance, the personnel aboard the *Marabell 8* began the first morning of their fishing vacation eager to catch Spring salmon, rumoured to be in the area of Lacy Island. Apparently, neither was aware of pertinent weather information posted near the gangway.

When transiting an area of rough water, a vessel's safety is, to a large extent, dependent upon the boat-handling skills of its operator. In this instance, the operator of the *Marabell 8* had not operated a boat in the area of Langara Island in the five years before the accident and was not an experienced boat handler. Hence, the hazard associated with handling a boat in the weather conditions encountered was not fully recognized by the operator.

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[3] A distance of approximately three miles.

Most of the boat-renting/chartering public do not have the necessary proficiency to operate a small boat, particularly in adverse weather. The master of the mother vessel *Marabell* had warned the guests of navigational hazards in the area and had posted the weather information at the gangway to inform guests who had access to a boat. However, analysis of the weather forecast identifying areas considered safe to visit and those that posed hazards due to weather was not provided to help guests make an informed decision based on risk.

Safety Procedures

There is no regulatory requirement for the owners of vessels such as the *Marabell* to monitor the activities of the guests when they are away from the mother ship in small boats. Consequently, when an emergency arises, there is no way of ensuring the provision of prompt assistance either from the authorities or the mother vessel. There is, therefore, a potential for the situation to worsen to the extent that it can seriously jeopardize the safety of the boat and its occupants. The safe operation of an open boat in the exposed waters on the west side of Langara Island demands that additional precautionary measures be instituted to ensure safe passage. Such procedures could include: instituting the "buddy system", where at least two small boats travel together and maintain visual contact with each other for the duration of their passage away from the mother ship; or the monitoring of the small boats by the mother ship, by way of small boats calling the mother ship at scheduled times or the mother ship contacting boats at preset intervals.

Canadian Regulatory Requirements

Pleasure Craft Operator Certification and Safety

The transitional provisions of the *Competency of Pleasure Craft Regulations* came into force on 01 April 1999. As a result, in the future, operator licences will be required when operating pleasure craft. The proof of competency requirement does not apply to non-residents, whose stay in Canada does not exceed 45 days, who operate a pleasure craft.

In light of this fact, the operators of sports fishing companies should ensure that their clients demonstrate their ability to operate boats safely, i.e., basic seamanship, understanding the compass and the chart for the area in which they will be fishing. If a client is not able to demonstrate these abilities, alternative arrangements should be made -- such as the provision of an experienced guide.

Accessibility of Life-saving Equipment

The issue of the accessibility of emergency equipment aboard open boats that have capsized has been addressed by the Board in response to previous accidents. In the 1992 drowning deaths of two persons aboard a small, open chartered boat, the Board recommended that "the Department of Transport initiate research and development into ways of ensuring the

accessibility of all emergency equipment, including in a capsizing situation."[4] In response to the recommendation, a study entitled *Safety Equipment Accessibility on Small Commercial Passenger Vessels - TP13026E* was completed by MIL Systems on behalf of Transport Canada Marine Safety (TCMS) in March 1998. This study did not fully address the safety deficiencies of concern to the TSB. In 1999, TCMS undertook a more thorough review of accessibility of life-saving equipment and intended to publish the information by the end of that year. However, to date, the issue remains essentially unaddressed. TCMS now proposes that, as part of Transport Canada's (TC) *Canada Shipping Act* (CSA) regulatory reform, the issue of accessibility of life-saving equipment be reviewed as part of the *Life-Saving Equipment Regulations* and *Small Vessel Regulations*. It is recognized that such a review will take time and, in the interim, the safety of those on board small vessels will continue to be at risk in an emergency situation.

Ineffectiveness of Current Requirement for Emergency Signalling Equipment

Several means of alerting others of an emergency situation, other than by calling on a marine VHF radio, are available on the market. Long-range emergency signalling equipment (ESE) includes waterproof portable radios and personal locator beacons (PLB). Short-range ESE includes search and rescue transponders (SART) and mini flares.

The rapidity of capsizing may preclude transmission of a distress message, prefixed Mayday, as in this instance. Because the vessel carried a VHF set, which was attached to the vessel, the only means of alerting search and rescue (SAR) authorities and seeking assistance was lost when the occupants were suddenly thrown into the water. Similarly, because the distress flares were stowed in the forward locker, they were submerged and were no longer retrievable. Carrying appropriate long-range ESE could have permitted alerting of SAR authorities immediately. Also, carrying alternative short-range ESE would have provided persons in the water with a better means to seek assistance from others in the vicinity.

In cold waters, the success of a SAR mission depends on the prompt notification of SAR authorities and the prompt tasking of SAR resources or, alternatively, in operations such as these (where vessels operate from a mother ship), on communicating distress directly to the mother ship. The lack of appropriate ESE to communicate/signal distress can result in the loss of valuable time and adversely affect the success of a SAR mission.

The selection of life-saving equipment appropriate to a particular small vessel operation should take into consideration the following:

a. small vessels operate in a variety of environments;
b. different operations have different life-saving equipment needs;
c. the Canadian climate poses significant hazards to survival and marine safety; and
d. maximizing survival capability involves trade-offs among the various components of a life-saving system.

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[4] TSB Recommendation No. M94-05, Report No. M92W1031

Current *Small Vessel Regulations* are prescriptive in nature and the requirement to carry life-saving equipment applies to a broad range of commercial activity. Further, risk varies from operation to operation and some safety equipment is better suited to mitigate risks than others. The regulations call for the carriage of flares stowed in a forward locker. In case of a sudden capsize, as in this instance, the only means of seeking assistance from others in the vicinity was lost. As a result, individuals who find themselves in the water are subjected to unacceptable risk. The prescriptive nature of the regulations, coupled with the delay in the review of the accessibility of the life-saving equipment, will continue to decrease the chances of survival for persons finding themselves in the water.

Safety Inspection

TC inspected the mother vessel but did not inspect the smaller vessels involved in the operation as the small vessels were considered to be a pleasure craft. TC is aware that the *Marabell* was engaged in commercial activity, whereby the guests purchased a fishing package comprised of room and board on board the *Marabell* and the use of smaller vessels (*Marabell 8)* for sport fishing/recreational activity. There is an expectation on the part of a consumer purchasing such a package that the entire operation meets a minimum level of safety.

Findings as to Causes and Contributing Factors

1. The occupants of *Marabell 8* were apparently unaware of the forecast weather when they departed for the fishing area.

2. The operator did not have the boat-handling skills to navigate Parry Passage safely in the prevailing wind and wave conditions, nor was he required to meet regulatory "proof of competency" requirements.

Findings as to Risk

1. The guests were not provided information on the areas considered hazardous due to weather, which precluded them from making informed decisions based on risk.

2. The lack of appropriate ESE to communicate/signal distress results in the loss of valuable time, adversely affects the success of a SAR mission and decreases the chances of survival for persons who find themselves in the water.

3. There is no requirement for the mother vessel to monitor the activities of guests when they are assigned to a recreational activity vessel, nor is there a requirement to retain some form of radio contact. Consequently, in an emergency, there is no way of seeking prompt assistance from authorities or the mother vessel.

4. TC inspected the mother vessel but did not inspect the *Marabell 8*.

Other Findings

1. The owner/operator of the *Marabell 8* provided safety equipment in excess of the regulatory requirement.

Safety Action

Safety Concern

Safety Procedures within the Sport Fishing Industry

In 1995, the *Charlotte Explorer 4*, which was fishing alone, capsized and its two occupants drowned (TSB Report No. M95W0140). The Board determined that the charter company's procedures to help ensure the safety of its guests were not enforced. These procedures concerned vessels fishing alone, the maintenance of regular radio contact and the provision of security patrols.

The safety issues identified with the operation of the *Marabell 8* are similar to those identified in the *Charlotte Explorer 4* occurrence, in which case the Board indicated that practices, such as the "buddy system" and scheduled radio check-ins, would eliminate some of the risks.

Safety of Guests in a Commercial Venture

The Board believes that, in a commercial venture, the safety of guests who purchase a package comprised of room and board aboard a mother vessel (TC inspected) and the use of a pleasure craft for recreational activity can only be reasonably ensured when all of the components forming the package meet an appropriate minimum level of safety. The Board is concerned that all the facets of such a commercial venture are not inspected as if it were one operation.

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board authorized the release of this report on 11 December 2002.