

# Accident Report

Grounding

*Sanga Na Langa*

30 March 2006

Class C



REPORT NO.: 06 4041

VESSEL NAME: *SANGA NA LANGA*

<b>Ship Type:</b>	Commercial Passenger
<b>Certified Operating Limit:</b>	Enclosed & Inshore Limits
<b>Flag:</b>	New Zealand
<b>MSA No.:</b>	129254
<b>Length Overall (m):</b>	13.50
<b>Owner:</b>	South Pacific Sailing Limited
<b>SSM Company:</b>	Maritime Management Services
<b>Accident Investigator:</b>	Ian Howden

## SUMMARY

On 30 March 2006, after an evening fish, the Skipper of **Sanga Na Langa** thought he was well clear of the dangerous rocks off Kauri Point on the east coast of Waiheke Island in the Hauraki Gulf.

The evening sea breeze had eased off and conditions were nice and calm. Night had fallen and the flood tide was pushing him along as he motored south with the rocky coast of Waiheke Island to starboard.

The GPS clearly showed he was well clear of three dangerous rocks that lay to the west of his intended track. Darkness had fallen and the Skipper had posted a lookout on the bow just in case.

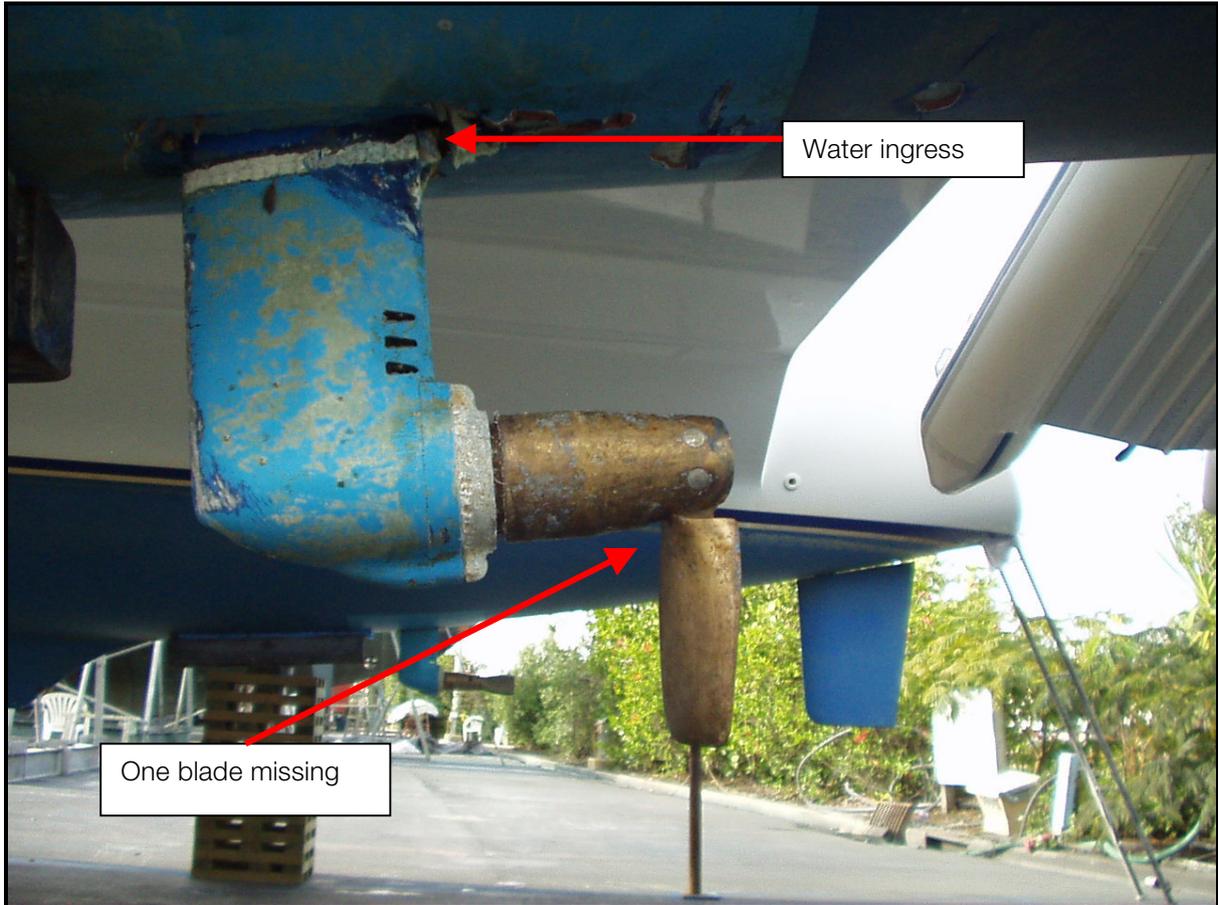
The vessel was travelling at six knots and the Skipper and his crew were looking forward to anchoring for the night and enjoying snapper for dinner. A few of the crew were enjoying a beer. The Skipper was abstaining from this until his vessel was safely anchored and secure for the night.

The Skipper knew this section of coast well and was aware of the dangerous rocks on that section of the coast. They were clearly visible on the GPS display unit, at a reasonable distance off the starboard side of the vessel. The Skipper was confident the GPS was providing him with accurate information. A friend had calibrated it when it was installed six years before and it had always given him accurate readings. A year ago the unit had been repaired by the manufacturer's agent after display problems. He was using an electronic chart system that is widely used in New Zealand.

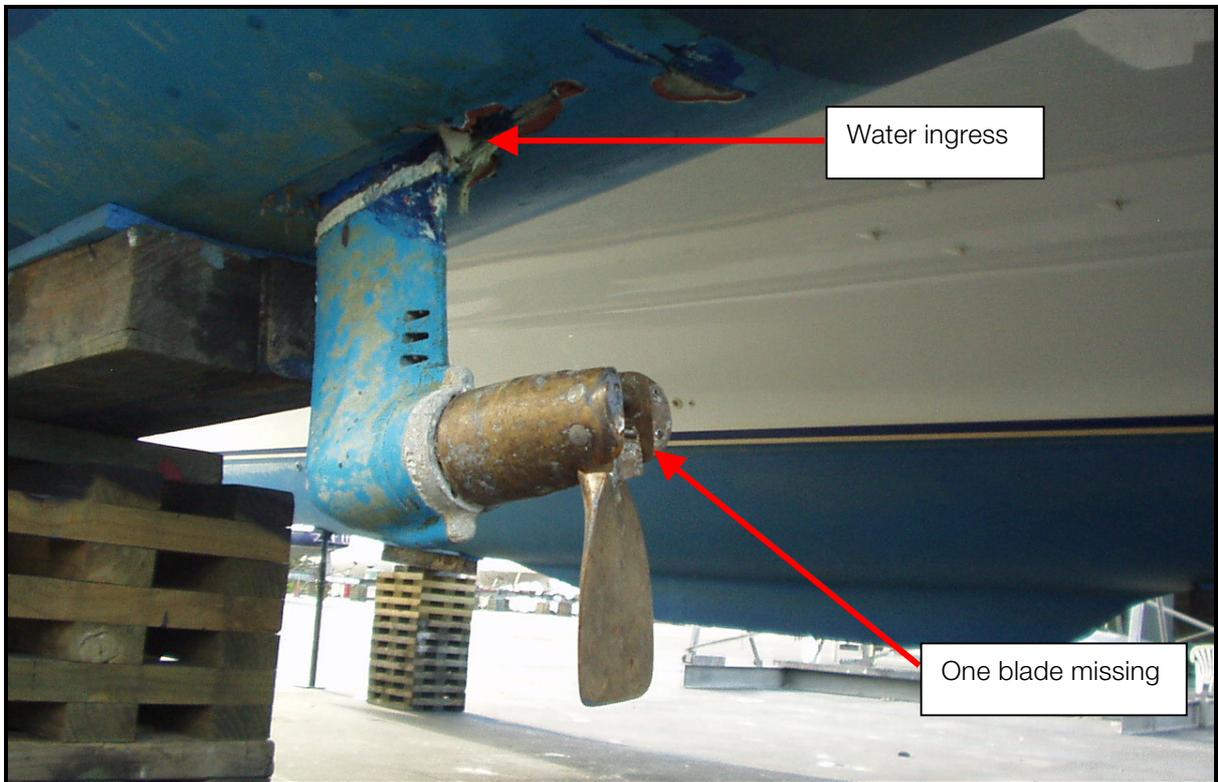
The Skipper was just about to refer to his paper chart to consider if he needed to be further offshore when a sudden warning from the lookout alerted him to the fact that there was broken water ahead. Approximately 10 seconds later vessel's hull and port propeller ground over the top of a rock.

Activation of the bilge alarm and automatic pumps were immediate. The Skipper made a hasty check below which revealed water ingress from the seal around a drive leg that had been shunted aft on impact.

Fortunately the pumps were able to control ingress and the vessel was beached in Man O War Bay on Waiheke Island using the port motor. Low tide revealed extensive port hull damage and a missing port propeller blade.



Photograph 1



Photograph 2

# CONCLUSIONS

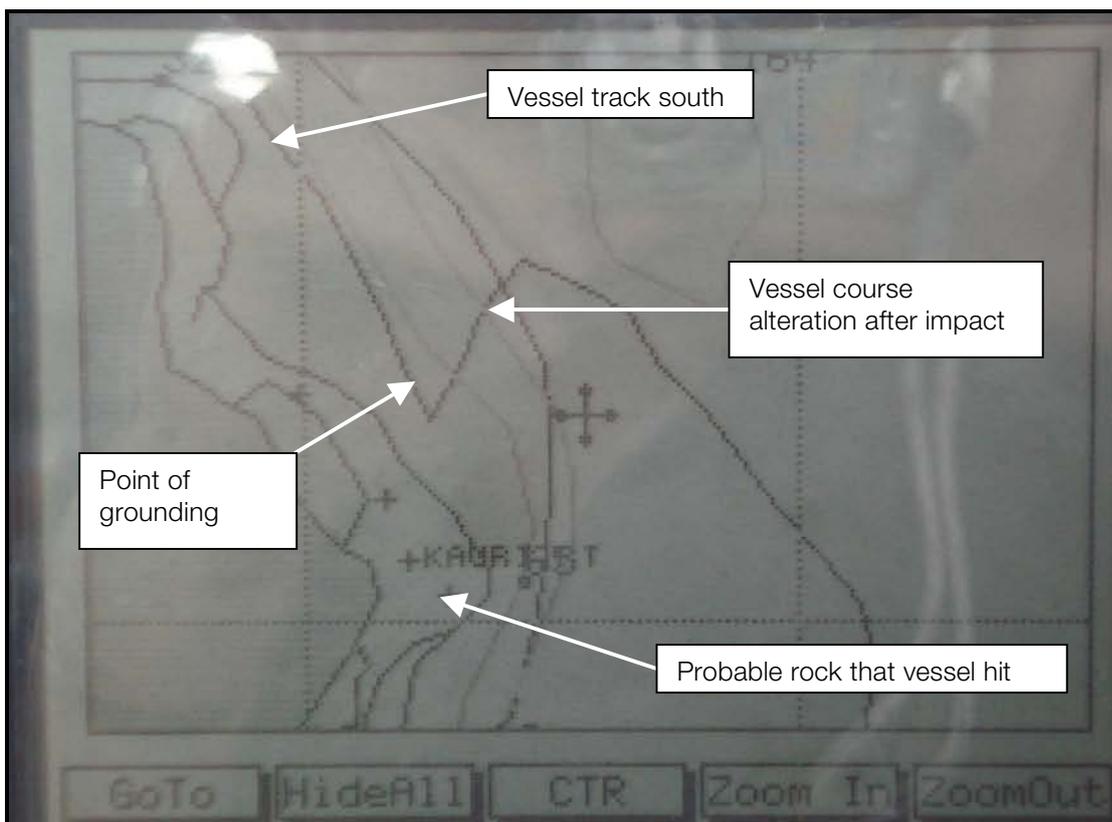
The Skipper had broken one of the cardinal rules of navigation namely over reliance on GPS data. Every maritime course teaches and should, hammer home the danger of using GPS data as the only means of position fixing, especially while operating close to the coast.

The electronic chart had the following warning printed on it:

*“This electronic chart should be used only as a backup to official government paper charts and traditional navigation methods”*

The Skipper concedes he learnt a good, albeit expensive, lesson. The following day whilst homebound the GPS put the vessel on top of a small island even though they were well clear. He will never again depend on GPS data to the same extent again and is happy to relate his experience so that other mariners will learn from his mistake.

GPS data can often give incorrect data for a variety of reasons. The manufacturers agent checked the model and determined there was no cross track error. The position of the rocks as displayed on the screen correlated with their position in NZ Chart 5324 which suggests the electronic chart was reasonably accurate. Often when “GPS assisted groundings” take place the fault lies with the accuracy of the electronic chart however the reasons can be varied and complex. It is not uncommon for display screens that have been monitoring a vessel's position whilst stationary, for example whilst berthed overnight, to show positions a considerable distance from the vessel's position.



**Figure 1**  
GPS Screen as Observed by the Skipper

A warning published by NOAA (National Oceanic & Atmospheric Administration – US Department of Commerce) in 2002 :

*With GPS providing such an accurate fix, the mariner now needs to pay closer attention to the reliability of the chart because accuracy limitations of charts will be critical to ship safety when GPS is used. For example, to save steaming time, mariners may become more daring and rely on their GPS to pass hazards depicted on charts much closer than prudent. However, the plotted hazards may have been positioned by less accurate navigational means than GPS and, if repositioned using GPS, could be charted in a different position.*

*GPS-derived positions often are of higher accuracy than the positions for charted data.*

*Navigators should be aware of all the factors that may affect the use of GPS positions when plotting on nautical charts. Based on this knowledge, the prudent mariners should pass charted hazards such as shoals or isolated dangers with utmost caution and at a safe distance, no matter what navigational method is used.*

## LESSONS LEARNED

GPS derived positions are a useful tool in determining a vessels position but should be used in conjunction with all other means of position fixing at the navigators disposal. The temptation to push a button to obtain such data and not utilize more labour intensive, traditional methods of position fixing is, to put it bluntly, bad seamanship that puts vessels and their crew at risk.

Maritime New Zealand is concerned at what appears to be a growing tendency for mariners to place excessive reliance on GPS generated data in place of traditional methods of navigation and issues a strong warning against such practise.