

# YOSHI'S JOURNEY

*one turtle, two countries, thousands of kilometres*

Swimming thousands of kilometres of ocean is not uncommon for marine turtles, but the migration of one loggerhead turtle sparked interest around the world, after she travelled from the waters of South Africa before crossing the Indian Ocean to the north-west Australian coast over a two-year period. It is not known exactly why she made the journey, but her story has highlighted what can be achieved when researchers from different countries team up in the name of science and conservation.

by Kendall O'Connor, Sabrina Fossette-Halot and Hannah Hampson



**A** loggerhead turtle named Yoshi was released with a satellite tag on her back from Two Oceans Aquarium in Cape Town, South Africa, twenty years after she was found by a Japanese fishing vessel with an injury to her carapace.

When she was given to the aquarium in 1997 she was a juvenile, about the size of a dinner plate. The vessel's captain named her Yoshi after their on-board cook, Yoshitaro, who was also small in stature.

In the first year after her release she travelled more than 8600 kilometres up and back down the west coast of Africa, before swimming around the cape and heading for Australia.

## LENDING A HAND

In early 2020, scientists at the Department of Biodiversity, Conservation and Attractions (DBCA) were alerted by the aquarium and the South African Department of Environment, Forestry and Fisheries that Yoshi was making her way to Western Australian waters off the Pilbara coast.

Yoshi had already provided some insights into the survivorship of a rehabilitated turtle, but there were many more questions to answer, such as where was she going to settle, could she navigate to a nesting beach after so long in captivity and was she going to reproduce.

After reaching the Pilbara coast, Yoshi stayed close to shore near the seaside town of Point Samson for a couple of weeks and DBCA's principal scientist Scott Whiting hoped his team could track her down in the remote and turbid coastal waters and replace the satellite tag before the battery ran out.

Once in Karratha, Scott, along with research scientist Sabrina Fossette-Halot, boarded a Fisheries vessel and were joined by Alan Dick and Lewis Robertson from the Department of Primary Industries and Regional Development (DPIRD) and local Ngarluma ranger, Tiras Walker.

Yoshi's satellite location focussed the team on an area north-east of Depuche Island, between Ronsard Island and Reef



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**Main** Loggerhead sea turtle.

*Photo – Gary Bell/Oceanwide Images*

**Above** Yoshi at Two Oceans Aquarium.

**Left** Yoshi ready for release.

*Photos – Geoff Spilby*

Island, which lies between Karratha and Port Hedland. The team used a hand-held receiver to pick up the beeps emitted from the tag each time she surfaced.

After searching for several hours, the team finally started spotting turtles at the surface and was soon surrounded by a dozen loggerhead turtles. It looks like they had discovered a feeding ground, which was not previously known. Loggerhead turtles are wary of boats, so it was difficult to get close to them when they surfaced and sadly, Yoshi was never identified among the group.

## HOMeward BOUND?

Turtles spend their life swimming in the ocean so the fact that Yoshi has swum thousands of kilometres is not a surprise, but an Indian Ocean crossing for an adult loggerhead had never been recorded. Yoshi may be returning to foraging grounds closer to where she was born, after 20 years in captivity. This type of migration is called the 'developmental' migration.

"Having swum an almost direct route from South Africa to Western Australia

without stopping, and probably with limited food, is impressive," said Dr Scott Whiting.

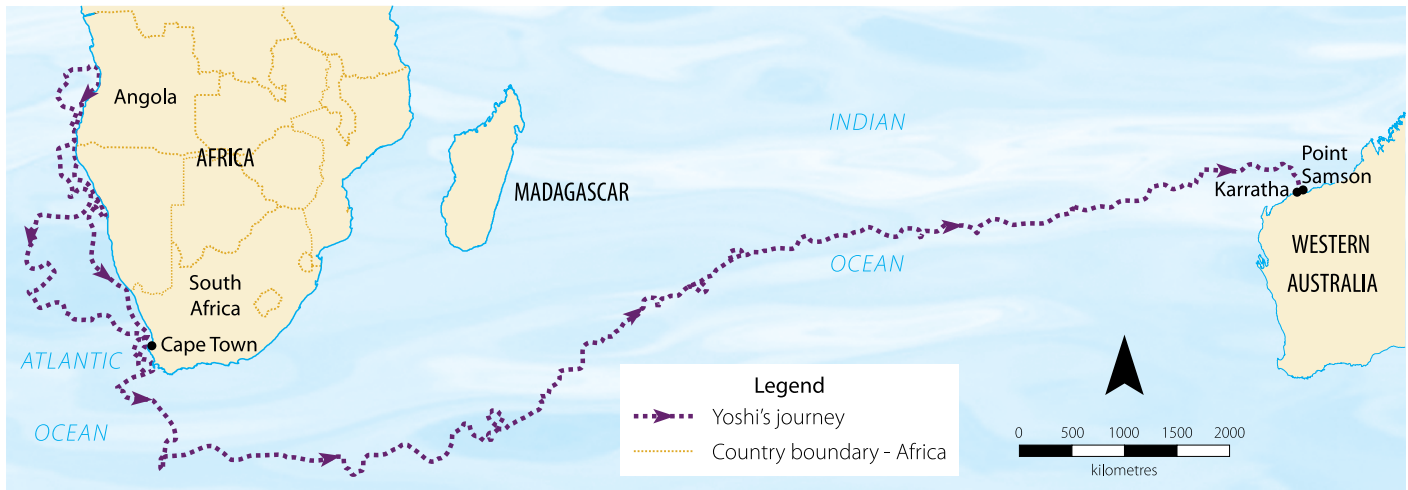
"And the fact that she directly found a good foraging area and the company of other loggerhead turtles is even more impressive."

Yoshi's track shows she has followed almost the same route, but in the opposite direction, as post-hatchling loggerhead turtles that have been satellite tracked from WA rookeries in areas such as Shark Bay and Ningaloo.

"It is likely Yoshi behaved the same way as loggerhead turtles that hatch in WA, leaving their natal beach as hatchlings following currents across the Indian Ocean, first towards Madagascar, and then probably around the Indian Ocean for many years until they reach sub-adult age, and return to foraging grounds close to where they were born" said Scott.

"It's suspected they are decades old before they enter coastal waters that will become their home and their base to embark on reproductive migrations to their natal beach."





“Yoshi appears to be searching for a foraging area to call home.”

Loggerhead turtles are listed as endangered, populations are severely depleted around the world and in the Indian Ocean, and there remain many knowledge gaps for Indian Ocean loggerheads including post-hatchling dispersal, locations of foraging grounds and survival rates.

Although Yoshi’s satellite tag will likely stop transmitting soon, the efforts to learn more about her highlight the importance of researchers and governments around the world collaborating in the name of conservation.



### Where you from, Yoshi?

It is still not known if Yoshi was indeed born in WA.

One theory is that she hatched in WA, and that’s why she crossed the Indian Ocean but was caught before she could come back to Australian waters as a sub-adult. This theory is being tested with a genetic study.

Loggerhead rookeries are also found on the east coast of Australia as well as South Africa and Oman in the Middle East so there is also a chance that she is lost and simply following the coastline until she finds the ‘right’ place.

Above Loggerhead turtle hatchling.

Above right Adult loggerhead turtle.  
Photos – David Bettini

Right Loggerhead turtle.  
Illustration – DBCA

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