# Monkey Mia News

Issue 5 Summer/Autumn 02

DEPARTMENT OF Conservation AND LAND MANAGEMENT
Conserving the nature of WA

SHIRE OF SHARK BAY

***Welcome to the fifth issue of* Monkey Mia News.**
***This newsletter is produced twice a year, giving an update on what's happening in this important region, the Shark Bay World Heritage Area. Monkey Mia News is a non-profit publication to give visitors an understanding of the happenings at Monkey Mia, including the important research undertaken in Shark Bay. Why not become a Monkey Mia Dolphin 'Friend' and receive regular newsletters and other benefits? See back page for details!***

## Dolphin News – onset of breeding season

The warmer months at Monkey Mia signal the onset of the dolphin breeding season. This runs from October through to March.

At this time of year dolphin visitation becomes a little less predictable—largely because of offshore distractions. However larger numbers of dolphins have been coming in recently due to adolescent and mature males following the females into shore. Up to 16 dolphins have come into shore lately.

Each of the three long term beach visiting females has a dependent calf.

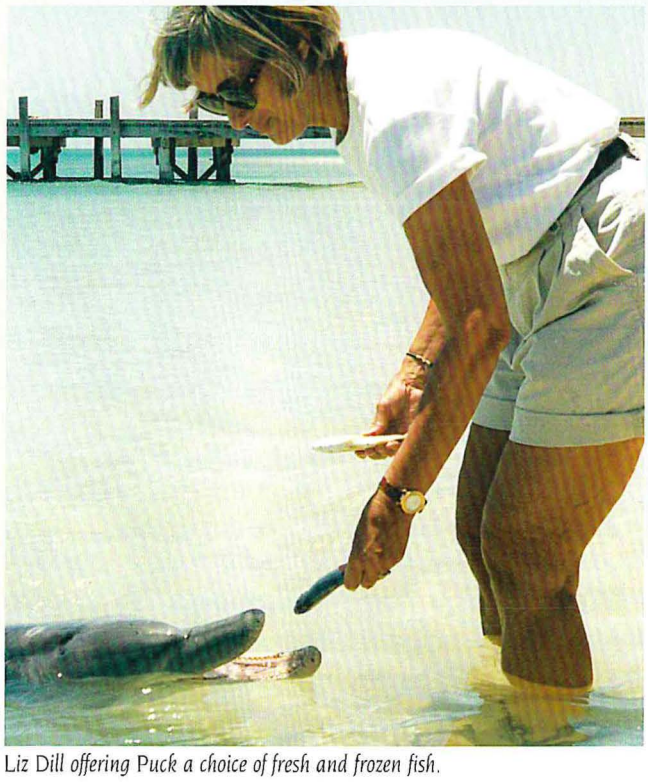
Now that these calves are all around three to four years of age it is likely that the mothers will begin a gradual weaning process during the next year. This is because Puck, Nicky and Surprise may come back into season over the summer period and fall pregnant. If this is the case the mother will gradually stop her calf from nursing during the next six months.

A dependent calf feeds from its mother every half an hour or so. The weaning process involves the mother slowly limiting the amount of milk she makes available to her calf. When the calf tries to engage in the nursing position, the mother moves away to prevent access to the mammary teat. If the calf persists in trying to nurse, the mother will either tail slap or bite the calf to deter it from trying again. While dolphins have a 12 month gestation period, the mother will try to have her older calf fully weaned within the first six months of pregnancy. This ensures that the older calf is fully weaned by the time the new calf is born.

After the weaning process is complete, the newly independent calves rely heavily on their social and hunting skills to survive.

*Nicky and baby.*

History at Monkey Mia has shown that including calves in the feeding program results in the loss of their natural instinct to hunt for themselves. Feeding also affects their ability to develop the social relationships necessary for their long term survival. It is for this reason that none of the beach visiting calves are part of the feeding program at Monkey Mia.



*Liz Dill offering Puck a choice of fresh and frozen fish.*

## Food preference experiments for dolphins

**By Lawrence M. Dill, Professor, Simon Fraser University, Canada.**

Ask restaurant patrons whether they'd prefer a fresh or a previously-frozen fish for tea, and the answer is immediate and emphatic: the fresh fish tastes better and has a finer texture, and is chosen every time.

The beach dolphins at Monkey Mia have never been given such a choice, having been provided only with previously-frozen fish in recent years, and the question arose whether they might show a similar preference if given the opportunity.

Liz and Larry Dill, from Simon Fraser University, Canada, took advantage of a recent visit to Monkey Mia to try to answer this question.

During a three-week period in October, each of the three beach females was offered a pair of fish (one fresh and one previously frozen) at the end of 20 separate beach visits.

The dolphins learnt not to expect to receive both fish; otherwise there would be no reason for them to choose.

The results were definitive: these dolphins are not discriminating consumers! They expressed no preference for the fresh or the previously-frozen fish, choosing each equally as often. Curiously, Nicky strongly preferred whichever fish was in the researcher's left hand while Surprise showed an equally strong preference for the fish in the right hand; Puck was indifferent.

It demonstrates once again the individual personality traits of the three animals. But all were consistent in showing no preference for fresh yellowtail. Whether this means they can't distinguish between the fish types, or simply don't care to, suggests that the current feeding practice is acceptable to the dolphins. It also means that the Department of Conservation and Land Management officers needn't add another skill (fishing) to their repertoire!

This sort of information is useful in determining the value of different foraging habitats for dolphins, and has conservation implications. It is difficult to get such data for wild dolphins, and studies such as this demonstrate the potential for the beach visiting dolphins at Monkey Mia to contribute information that may be critical for the management and continued well-being of their fellow wild relatives.

## Look out for the rays of the bay

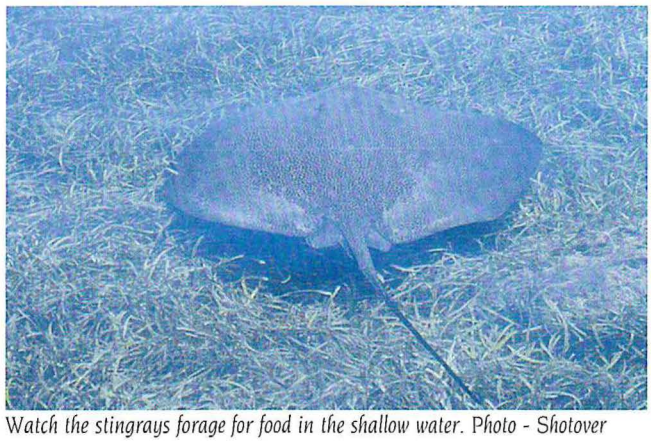
Monkey Mia is most famous for its dolphins but marine creatures such as dugongs, sharks, turtles and rays are just as visible.

With the incoming tide, some animals follow the edge of the shore looking for food.

Stingrays and shovelnose rays are generally the most visible, as they have flat bodies that allow them to forage for food in extremely shallow water. Here they look for small fish, shellfish, crabs and other bottom dwelling invertebrates. Using plates of flattened teeth to aid in crushing their meal, they find their prey by using a wide array of finely tuned sensory organs. These include organs that give rise to the common senses of smell, touch, hearing and taste, as well as more specialised organs—called lateral lines—that can detect vibrations and magnetic and electrical fields.

While most rays are readily identifiable, they come in a wide variety of shapes and forms. Perhaps most distinct are stingrays, which have round, disc-shaped bodies and a long, straight tail. Harder to identify are shovel-nosed rays, which are sometimes known as shovel-nosed sharks because of the sharklike appearance of their tails and the high upper lobe on their tail fins.

Rays vary widely in colour and pattern: some species are bright blue and spotted while others are yellow, brown or banded.



*Watch the stingrays forage for food in the shallow water. Photo - Shotover*

Rays, with their fluid and graceful movements, are often and aptly described as angels of the sea.

They first appeared on earth about 400 million years ago. Because they've had hundreds of millions of years to evolve, it's no surprise they're perfectly adapted to life in the shallow seas. Shark Bay, with its enormous expanses of shallow water, provides them with the perfect habitat. Walk the shore and see for yourself!

## Cinderella coast . . .

**from "useless" to World Heritage jewel**

In 1616 Dutch Captain, Dirk Hartog described World Heritage-listed Shark Bay as a "useless south land".

It was four years before the Mayflower set sail for America, the year of Shakespeare's death, and 179 years before Captain Cook's landing in Botany Bay.

Intrigued by the towering vertical cliffs of this strange coast, Hartog rounded his ship the *Eendracht* past a promontory into a secluded bay.

This promontory was Cape Inscription, the northern point of a vast and remote island extending northwards from Shark Bay's westernmost peninsula, and the westernmost point of mainland Australia.

Unable to locate food and water, *Eendracht*'s crew set sail for Batavia. But not before climbing Cape Inscription and nailing to a post a common kitchen utensil—a pewter plate, hammered flat and inscribed with the names of those who made the first known European landing in Australia: Dirk Hartog and his crew.

Today, this wild and rugged island bears tribute to history's intrepid Dutch captain with its name—Dirk Hartog Island.

Other explorers to follow, including William Dampier (1699) and Henry Mangles Denham (1858), shared Hartog's dismal opinion of Shark Bay. Their impressions were reflected in names given to the places they surveyed. Places such as 'Disappointment Reach', 'Useless Loop' and 'Hopeless Reach' are testimony to their futile attempts to find water.

**Internationally recognised**

Nearly four centuries later, Shark Bay is internationally recognised as an area of outstanding natural value. Awarded World Heritage status in 1991, it is one of only 138 natural sites across the globe that have made the World Heritage List.

To receive World Heritage status, a natural site must meet one of four strict criteria set out by the World Heritage Committee. Shark Bay is extra-special in that it is one of only 15 World Heritage sites that meet all four criteria. This puts Shark Bay on par with the Grand Canyon, the Galapagos Islands and the Great Barrier Reef.

*Zuytdorp cliffs in the World Heritage Shark Bay area.*

The four criteria for World Heritage listing are:

- the existence of outstanding examples representing major stages in the Earth's evolutionary history;
- outstanding examples representing significant ongoing geological and biological processes;
- examples of superlative natural phenomena and;
- important and significant habitats for conservation of biological diversity.

Features of Shark Bay are:

- the unusual hypersaline marine environments of Hamelin Pool and L'Haridon Bight (these waters are twice as salty as the open ocean);
- the largest and most diverse seagrass beds in the world, which help maintain the hypersaline conditions in Hamelin Pool and L'Haridon Bight by blocking tidal flows into and out of these shallow-water areas;
- the stromatolites – living fossils indicative of the first life on earth that can only survive in hypersaline waters such as those of Hamelin Pool;
- the last remaining habitats for some of the most endangered animals in Australia and the world, including the Western Barred Bandicoot and the Banded Hare Wallaby; and
- the striking landscapes for which Shark Bay is renowned: opaline waters contrasting with the deep ochres of the surrounding dunes, and some of the tallest and most dramatic sea cliffs in Australia.

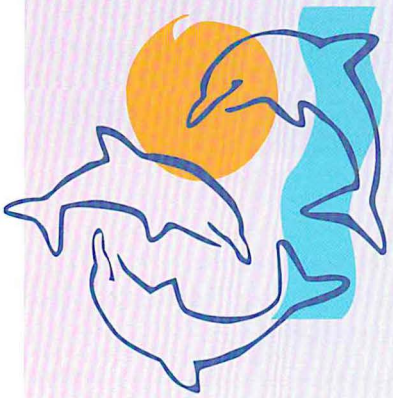
The World Heritage Convention aims *to protect natural and cultural properties of outstanding global value against the threat of damage in a rapidly developing world*. Thankfully, World Heritage listing will help ensure Shark Bay's natural environment is conserved for the enjoyment of our future generations.

# Dolphins of Monkey Mia Research Foundation

The mission of the Dolphins of Monkey Mia Research Foundation is:

**'To better understand and protect the dolphins and wildlife in Shark Bay through research.'**

Long-term research on the Shark Bay and Monkey Mia dolphins has been conducted by an international team of researchers since 1982. This is the second-longest running dolphin project worldwide. Researchers come from Australia, Europe and North America. Most of what is known about dolphin behaviour, social structure and ecology, comes from the Shark Bay team. *The Dolphins of Monkey Mia Research Foundation* was established in 1998 to support the long-term research on the Monkey Mia and Shark Bay dolphins. Your donations will help protect and monitor more than 600 dolphins and will assist in this exciting scientific endeavour! Contributions to research can be forwarded to the address below.



For more information, please contact us by mail or through our website.

**The Dolphins of Monkey Mia Research Foundation**
**PO Box 140, Claremont, WA 6010**
**www.monkeymiadolphins.org**

## The Monkey Mia Dolphin Friends Membership

You will receive a copy of the Monkey Mia learning package and a discount voucher for entry to Monkey Mia (valid for one year)

**Title: Mr / Mrs / Miss**

**Name** _____ **Age:** ☐ 0-10 ☐ 11-25 ☐ 26-35 ☐ 36-50 ☐ 51+

**Address** _____

**State** _____ **Postcode** _____ **Country** _____

**Article suggestion** _____

**Subscriptions:** Individual $10 ☐
Family $20 ☐

**Donations** _____

**Return to:** Monkey Mia Reserve
C/o 67 Knight Terrace
DENHAM Western Australia 6537

**Payment Method:**

☐ Cheque enclosed ☐ Bankcard ☐ MasterCard ☐ Visa

**Account number** _____

**Expiration date** _____ **Signature** _____

**(Office use only) Date joined:**_____ **Member no:**_____

20016619-0102-15M

DEPARTMENT OF Conservation AND LAND MANAGEMENT
*Conserving the nature of WA*

SHIRE OF SHARK BAY