SPLASHING ABOUT: A pod of common dolphins frolic in Algoa Bay Picture: STEPHANIE PLÖN

BEADY EYE: A bottlenose dolphin appears to strike a pose for the photographer Picture: THIBAUT BOUVEROUX

Key research into Algoa Bay dolphins

NMMU team focuses on endangered humpback species

Heather Dugmore

FINDING out why Algoa Bay has unusually large pods of common and bottlenose dolphins is at the heart of Dr Stephanie Plön's research.

Plön is from the Department of Oceanography in the School of Environmental Sciences at NMMU.

She and her research team often have four or five sightings a day of groups ranging from 10 to 15 Indian Ocean bottlenose dolphins to several hundred long-beaked common dolphins.

The sightings are often associated with bait balls or large schools of sardines or red eyes (part of the herring family).

"It is amazing and overwhelming; it's like a mini sardine run," Plön said.

"The water is literally boiling with dolphins and gannets and, among all this, you're trying to observe and photograph the dolphins, because we need to identify individuals for our research, from notches or marks on their dorsal fins."

Her research team includes four PhD students, three MSc students and one postdoctoral fellow.

Three or four of them go out to sea at a time, spending up to 10 hours in a 6m semi-rigid inflatable, taking field notes and photographs.

While Algoa Bay's bottlenose and common dolphin populations appear to be healthy, the Indian Ocean humpback dolphin is in serious trouble.

It is now classified as endangered, according to the 2015 Red Data Book of Mammals of South Africa.

The estimate is that the population has dropped to under 1 000 in South African waters.

Updated population research on these dolphins is therefore of critical importance and in June last year postdoctoral researcher Dr Thibaut Bouveroux started his research on the humpback dolphins in Algoa Bay under the guidance of Plön.

SPECTACULAR SHOW: Bottlenose dolphins have fun in the surf in front of the dune fields at Alexandria Picture: STEPHANIE PLÖN

The population decrease could be related to a decrease in food availability and/or a range of human impacts – from shipping and fishing to pollution and paddle skis.

> **It is overwhelming. It's like a mini sardine run; the water is literally boiling with dolphins and gannets**

Plön said the humpback dolphin was an extremely shy animal that was easily disturbed.

"These animals live within 500m of the shore where there is a lot of human activity. This might have a negative impact on their reproductive rate or food abundance," she said.

"Even paddle-skiers surprise them when they get within a few metres of them, which is why I always advise paddle-skiers to be on the lookout for them and keep their distance."

Plön said Algoa Bay was ideal for research on dolphins and also whales for a number of reasons. These included the presence of several cetacean species, and the marine mammal collection at the Port Elizabeth Museum, which is the largest in the southern hemisphere and third largest in the world.

Established in the 1960s, the collection has been put together from dolphin and whale strandings, and animals incidentally caught in shark nets along South Africa's coastline.

"Our dolphin and whale species are not only important in their own right, they are also a key indicator species for overall ocean health because they are at the top of the marine food chain," Plön said.

"Research on them informs the decisions and actions required to sustainably conserve our oceans and marine species."

Originally from Göttingen, Germany, Plön completed her undergraduate degree in marine biology at Swansea University in the United Kingdom.

She moved to South Africa in 1994 as a result of her interest in dolphins and whales and completed her master's and PhD at Rhodes University, followed by postdoctoral research in New Zealand.

She settled in Port Elizabeth in 2005 to pursue research on dolphins and whales along the Eastern Cape coast.

One of her team's most recent research areas is to determine how far dolphins travel from Algoa Bay during the annual sardine run.

They are comparing this to where and how far they travel outside of the sardine run, which starts off East London in late May or early June and moves up the coast to Durban.

"There is some scientific debate as to whether the sardine run actually starts in Algoa Bay, but it has not been confirmed," Plön said.

Over the past seven years, Plön and her team have also been researching the pathology of stranded Indian Ocean dolphins.

Since 2009, parasite lesions have been detected in all the dolphin species. The specific parasite has yet to be identified, but marine parasites are increasingly being linked with ocean pollution.

Experts find three lonely planets

SCIENTISTS said yesterday they had discovered a trio of Earth-like planets that are the best bet so far for finding life outside our solar system.

The three orbit an ultracool dwarf star a mere 39 light years away, and are likely comparable in size and temperature to Earth and Venus, they reported in a study, published in Nature.

"This is the first opportunity to find chemical traces of life outside our solar system," lead author and Belgium's University of Liege astrophysicist Michael Gillon said.

All three planets had the "winning combination" of being similar in size to Earth, "potentially habitable" and close enough for their atmospheres to be analysed with current technology.

The find opens up a whole new "hunting ground" for habitable planets, he said.

Gillon and his colleagues calibrated a 60cm telescope in Chile, known as Trappist, to track several dozen dwarf stars neither big nor hot enough to be visible with optical telescopes.

LIFE SEARCH: Scientists have found a trio of Earth-like planets

They zeroed in on a particularly promising one – now known as Trappist-1 – about one eighth the size of the sun, and significantly cooler.

Observing it for months, the astronomers noticed that its infrared signal faded slightly at regular intervals, evidence of objects in orbit.

Further analysis confirmed they were exoplanets – planets revolving around stars outside our solar system.

The innermost two circle their dwarf star every 1.5 and 2.4 days, though they are hit with only four and two times the amount of heat-generating radiation that Earth receives from the sun.

The more distant orbit of the third planet takes between four and 73 days, the study said.

"So far, the existence of such 'red worlds' orbiting ultra-cool dwarf stars was purely theoretical, but now we have not just one lonely planet but three," co-author Emmanuel Jehin, also from the University of Liege, said.

The discovery was a "paradigm shift" in the search for life elsewhere in the universe. – AFP

'Take your soul for a stroll' on SA pilgrim trail

David Macgregor

A BACKROADS "pilgrim trail" of 1 150km from Grahamstown to Nelson Mandela's Robben Island prison cell is pulling in hikers – even though only half the route has been plotted so far.

After hiking similar pilgrim trails around the world, Rhodes University professor George Euvrard spent years planning a South Africa route.

Although a health crisis during his first scouting walk several years ago to find suitable routes scuttled plans to finish in Mandela's cell, the first 575km of the trail was established.

Now plans are afoot to open up the rest of the Indlela yoBuntu Pilgrimage next year.

"I only got as far as Uniondale on my solo pilgrimage," Euvrard said.

"So there was no triumphant ending. But in a very real sense the end becomes irrelevant."

Euvrard said Mandela's cell remained the ultimate destination, and walks for sections or combinations of the trail were pulling nature lovers.

"They come from all over South Africa, by word of mouth – mainly strong, independent women in their 60s," he said.

Last year three women, including a 72-year-old, did the first two stages of the pilgrimage walk back to back.

The final two legs to Robben Island from Knysna will be open soon.

Since he started plotting the "take your soul for a stroll" route and finding places for footsore and hungry hikers to stay, Euvrard has clocked up more than 2 000km getting it going.

Each leg is completed within two weeks and hikers walk every day irrespective of the weather.

Accommodation and food are prearranged and a support vehicle carries personal belongings and food.

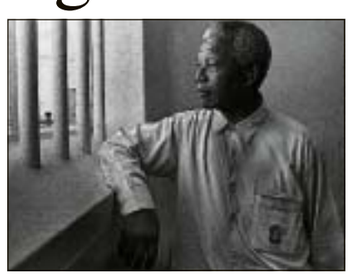
Daily distances walked vary between 18km and 32km depending on the terrain covered.

Euvrard said anyone with a reasonable level of walking fitness who had trained beforehand should be able to manage relatively comfortably.

Areas covered during the first two legs include the Cockscomb Mountains, Gamtoos Valley, Baviaanskloof, Prince Alfred Pass and Knysna forest.

Euvrard says the pilgrim trail "is a time and space for us all to contemplate the bigger questions of life, in humility and appreciation".

Supporter Archbishop Desmond Tutu said: "Our country and people desperately need dedicated and disciplined time and space to contemplate what it means to be fully human in the spirit of ubuntu, and the Indlela yoBuntu Pilgrimage will provide such a national resource."



TRAIL'S END: A pilgrimage route will finish in Nelson Mandela's cell