



UNDERWATER photographer Kristian Laine was diving near Lady Elliot Island in the Great Barrier Reef when he came across something astounding. Kristian could hardly believe his eyes when he spotted a 3-metre reef manta ray, not because of its size, but because of its colour.

He didn't realise it at the time, but Kristian was photographing the only known pink manta ray in the world.

Scientists at Project Manta, a research collaboration focusing on manta rays in Australia, are keen to know more.

You can see more of Kristian's photos on Instagram: #kristianlaine

Picture: Kristian Laine

Pink sensation

THE Great Barrier Reef has more than its share of cool and crazy creatures.

But have you heard about Inspector Clouseau, the pink manta ray?

Named after the main character in the film series *The Pink Panther*, this fellow was first spotted by a diver in 2015.

He is unique; the only known pink manta ray in the world.

Scientists are of course very interested in the ray, and researching why he is pink.

But while he stands out in a crowd, Inspector Clouseau is quite hard to find.

He is known to visit the waters near Lady Elliot Island on the Great Barrier Reef, but is rarely seen.

Researchers at Project Manta have managed to test a biopsy of Inspector Clouseau and have



ruled out early theories about his colour.

One theory was that he might have a skin infection, while another was that Inspector Clouseau had a condition called hypervascularisation - when blood vessels are close to the surface.

A third theory was related to his diet, similar to how pink flamingos get their colour from

eating brine shrimp and blue-green algae.

The scientists now believe that Inspector Clouseau is pink due to a genetic mutation, possibly erythrism.

It is not known whether he might pass on his pink pigment to offspring, so it is possible we could see more pink manta rays in the future.

It is not well understood, but

erythrism is an unusual reddish pigmentation of an animal's hair or skin.

It is caused by the absence of a normal pigment or the excessive production of others.

Erythrism has been observed in insects in the family Tettigoniidae, which we commonly call katydids, bush crickets or even grasshoppers.

These insects are commonly bright green, but the odd pink one can be found.

Some scientists believe it is possible more are born pink than green, it is just that the pink ones don't survive for long.

Given most foliage is green, it is not a good thing to be a pink or reddish grasshopper when you are trying to avoid predators.

Erythrism is also rarely present in leopards, and gives them a strawberry-coloured coat, along

with raccoons, Eurasian badgers and coyotes.

A biological pigment is a chemical that has a specific colour, and has many roles to play.

In humans, for example, melanin is a yellow to black pigment in our skin to help protect us from sun damage.

Different levels of melanin are present in the skin of different people, which is why there are such variations in the skin colours of people.

Melanin absorbs some of the ultraviolet rays from the sun, but not all.

This is why we need to apply sunscreen to protect our skin.

When light-coloured skin is exposed to the sun, it makes more melanin and our skin becomes darker.

Continued Page 2

Nature's colour confusion



Does melanism occur in humans?

Why is life more difficult for albino animals?

Can albino animals have regular coloured offspring?

From Page 1

This is what we call having a tan, which will help provide sun protection in the future.

But it is much better to help our skin out by applying sunscreen.

There are several other genetic mutations which can occur in an animal's pigment, but the best known are albinism or melanism.

Melanism occurs when animals have higher levels of dark pigment, and it turns them completely or partially black

For example, black panthers are the melanistic colour variants of leopards and jaguars.

Albinism is caused by an absence of pigment, resulting in white or yellowish hair, feathers, scales and skin, and usually pink or red eyes.

While rare, it occurs in mammals, birds, reptiles, amphibians, fish and invertebrates as well.

But not all white animals are albinos.

If you are thinking polar bears, you are correct, they are not albinos.

However, a polar bear's coat is not actually white.

It's hairs contain no pigment, are hollow like a straw, and scatter light inside them.

When the bears stand in the sun and all that light bounces off them, they look white.

How cool is that?

In mammals, including humans, albinism occurs when genes that are passed on by parents interfere with the body's production of melanin.

It is not as straight forward with other animals, because they produce pigments other than melanin.

Just to confuse you a little more, there are other conditions which result in the partial loss of pigmentation.

But we do know there is a population of small white native mammals living on an island in Tasmania, and they are albinos.

Your challenge is to find out all you can about these animals.

Examine this page for a hint.

Children's University Tasmania members can earn stamps in their passports for this challenge, at the discretion of their school coordinator.



Pictures: iStock/ Ken Griffiths/ Natalia Bratslavsky/ shmannys0/ Anton Rodionov/ slowmotiongli

Use the picture clues to solve the puzzle, then check the highlighted squares to find out what I am. The solution is below.

Cross QUIZ

DID YOU KNOW?
Weasels are related to badgers and stoats. They are nocturnal hunters, preying on small mammals and birds.

1.			L		
2.	O				
3.	E				
4.		Q			R
5.	L			M	
6.	W		V		R

SOLUTION: 1. Owl, 2. Mole, 3. Bear, 4. Squirrel, 5. Lemming, 6. Wolverine, MYSTERY ANIMAL: Weasel