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Hello!

Welcome to your latest penguin update



Benjamin Dupuis, marine predator researcher, Dumont d'Urville research station

By the time this update reaches you, we'll be heading into the Antarctic summer. It's a period of awakening for this frozen landscape – but it's also fraught with worry. Will the sea ice break up early? How hot will it get? Last

summer, our research station reached 6.7°C – the hottest February temperature on record. This might seem chilly to us, but penguins are adapted for life in the freezer, so these 'mild' temperatures don't suit them. And their icy homes are just as sensitive to the warming weather, making penguins the sentinels of Antarctica's changing climate. Turn over to see how WWF and its partners are working to understand the effects of a warming world. **Thanks for your support!**

MEET THE ADOPTION TEAM

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The balmy 6.7°C temperatures recorded in Antarctica last summer were the hottest on record since February 1993



ON THIN ICE

Changing sea ice has forced some emperor penguin colonies to move – and led to a surprising discovery...

Emperor penguins have a remarkable breeding strategy. Unlike other penguin species, they raise their chicks on a floating platform of sea ice connected to the shore, known as fast ice. It's a precarious way of life, and recent climate conditions have made it even more challenging.

Antarctica's ice is shrinking at an alarming rate, and the consequences can sometimes be devastating. Every summer, the huge expanse of floating ice breaks up, marking the point at which penguin chicks venture into the open ocean and start a life of their own.

But if the ice breaks up too early, the chicks are forced into the water before they've grown the waterproof feathers that protect them from the cold and help them swim.

A year ago, we shared terrible news from our partners at the British Antarctic Survey (BAS) that a huge number of emperor penguin chicks had drowned when the ice broke up early. Fortunately, the sea ice has been more stable this year, with fewer break-ups and fewer penguins suffering as a result – but it continues a worrying trend of whole colonies failing

to successfully raise their chicks to independence.

Amid these challenges is a glimmer of hope. Some of the colonies badly affected by last year's early ice break-up have shown signs that they're adapting by relocating to more stable areas, including icebergs and ice shelves (extensions of thick land ice). "The fact that we're seeing the worst-affected colonies start to adapt gives us hope that emperors can react to their changing environment and move to find more stable ice," says BAS scientist Peter Fretwell.

Your adoption supports BAS to scour satellite images to find and track emperor penguin populations. Recently, the search resulted in the discovery of four previously unrecorded breeding colonies, as well as the rediscovery of one believed to have vanished.

Despite some positive news, predictions for the emperor penguins' future remain stark. If ice loss continues, where will these Antarctic icons go? With your support, we can closely monitor how penguins are responding to their changing home, and use our findings to push for global action to slow climate change and buy them more time. Thank you.



Satellite imagery has led to the discovery of four emperor colonies this year

PICTURE THIS

Antarctica is remote, inhospitable and one-and-a-half times the size of Europe. So studying satellite imagery is often the most effective way to find and monitor penguin colonies. But what do you look for in a photo taken from hundreds of kilometres away?

"First, we look for the pinkish-brown stains of the birds' guano [poo] against the ice and snow," says BAS's Peter Fretwell, who's studied Antarctic satellite photos for 15 years. "It's hard to spot – a group of penguins could be just a couple of pixels.



The Vanhoeffen colony



A satellite image of the Dawson colony



Chicks are in danger

Why waddle when you can toboggan?

Half of all known emperor penguin colonies have been discovered through satellite imagery, making it a valuable tool for conservationists