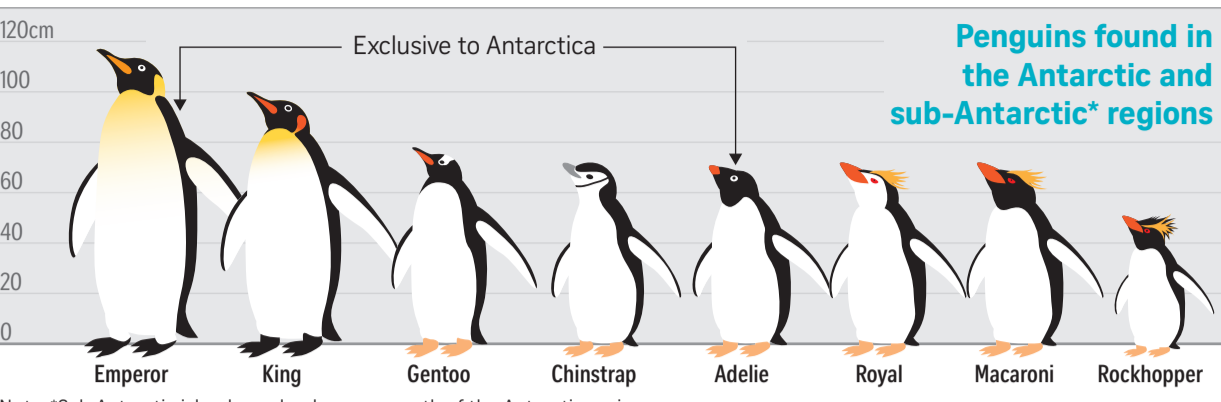


March of the penguins

As the world warms, animals adapted to cool climates, such as penguins, may be affected. The Straits Times looks at two such species.



Response to climate change

- Gentoo penguins can be found on the Antarctic peninsula and on the sub-Antarctic islands.
- Mr Gerard Baker, a polar historian who has worked in Antarctica for over two decades, said gentoo penguins may be expanding southwards as the world warms.
- The Australian Antarctic Division also noted that gentoo populations may be increasing in their southern range, especially around the Antarctic Peninsula.

Gentoo penguin
(*Pygoscelis papua*)

Height: 75cm
Weight: 5.5kg
Life span: 15-20 years
Conservation status: Least concerned

Short, stiff wings for "flying" underwater in search of food like fish and krill

Speed
Gentoo penguins are the fastest swimmers among all penguins, reaching speeds of up to 36kmh

The long tail is the most prominent one of all penguin species

Penguins' nests are often stained red from their discharge, coloured from the krill they feed on.

Pale whitish-pink webbed feet

Waterproof coat of feathers are kept well-oiled using oil from a special gland at the base of its tail.

Response to climate change

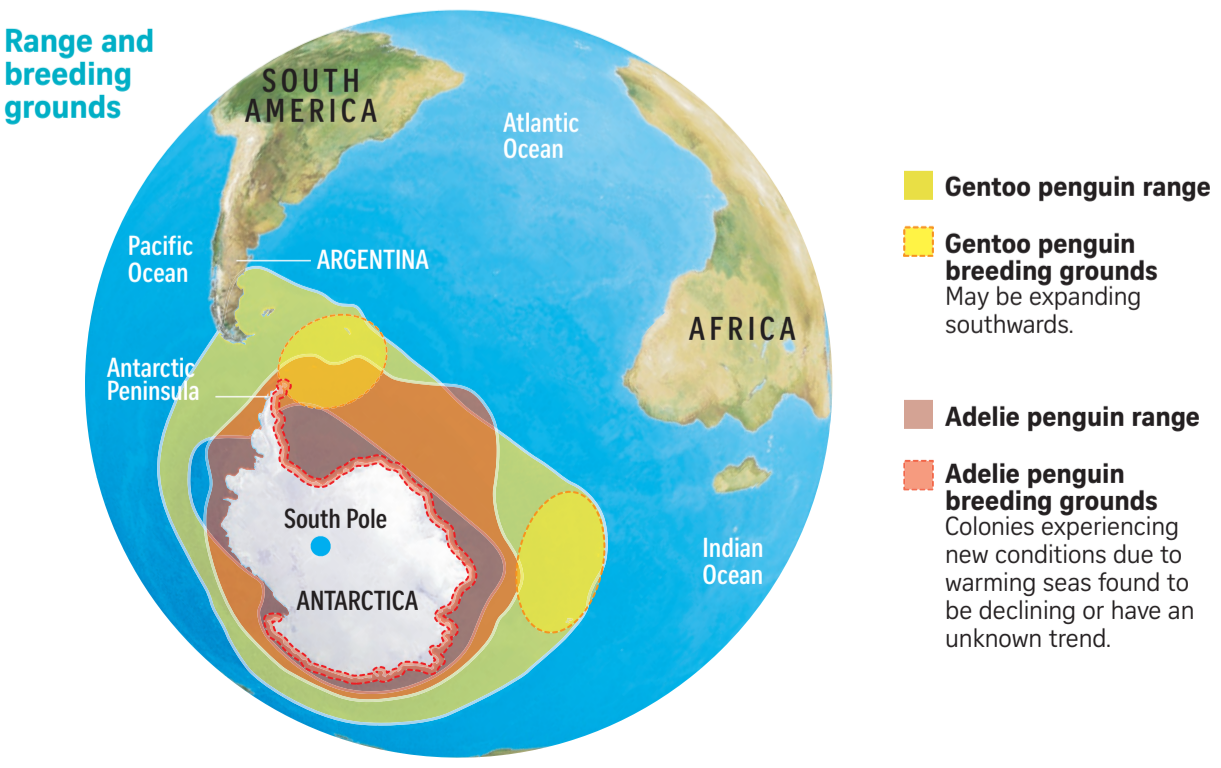
- Of the 18 penguin species, the Adelle penguin is one of only two true Antarctic species that make the Antarctic continent their home.
- The breeding colonies are distributed around the coastline of the Antarctic land and ocean.
- Scientific research shows that colonies of Adelle penguins exposed to novel conditions due to warming seas were found to be declining or to have an unknown trend.

Adelle penguin
(*Pygoscelis adeliae*)

Height: 70cm
Weight: 3.8-5.5kg
Life span: 11-20 years
Conservation status: Least concerned

Jumping ability
They are able to leap 2-3m out of the water to land on rocks or ice.

The tail is a little longer than other penguins' tails



Sources: THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE, NATIONAL GEOGRAPHIC, BRITISH ANTARCTIC SURVEY, AUSTRALIAN ANTARCTIC DIVISION, GERARD BAKER, BBC, TELEGRAPH PHOTOS: ASHLEIGH SIM, REUTERS STRAITS TIMES GRAPHIC