

00:01

Off the coast of Africa lives one of the most critically endangered birds on our planet, the African penguin.

00:08

Join us as we visit one of their last, and largest breeding colonies

00:13

to learn how humans have pushed them to the brink of extinction,

00:17

and how the Association of Zoos and Aquariums,

00:19

their partners,

00:21

and people like you

00:22

are on a mission to save the last one percent of their population before it's too late.

00:37

We're off the coast of Africa on an island called, Bird Island,

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in a marine protected area, surrounded by the critically endangered African penguin.

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My journey with this species began two years ago

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when the Association of Zoos and Aquariums held a Kickstarter campaign

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to raise funds to help save these penguins.

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Today, I'm here at the Bird Island research station

01:01

to meet these birds in person,

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and to share their struggle with the world.

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As seabirds,

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they spend months out in the open ocean

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and come to land for breeding.

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Once they find a mate, they build a nest.

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Which, for the African penguin

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is a burrow.

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And they usually burrow in their guano

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which is essentially

01:25

poop.

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It's nutrient-rich poop.

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For generations,

01:31

guano from millions of seabirds piled up

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and hardened over time.

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To avoid predators and the sun,

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they used their strong feet and claws to burrow deep into the guano.

01:43

Unfortunately,

01:44

this is one of the last natural burrows left on the planet

01:49

because somebody stole their guano.

01:53

"Why?" You might ask.

01:55

Two hundred years ago,

01:57

humans discovered that plants would grow larger and faster if they mixed penguin poop with soil.

02:04

Like humans, penguins eat fish

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because they are highly nutritious.

02:10

After digestion,

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nutrients end up in the guano,

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making it a powerful fertilizer.

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Word spread

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and people came from around the world to stock up,

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making guano more valuable than silver and gold.

02:29

The workers would start to pack it into really large bags

02:32

then they would bring them into this guano storage building and pile it all the way up to the rafters.

02:38

Then, they would transfer it onto the ship to be taken to the mainland or to Europe.

02:48

Within fifty years, almost all the guano on this island was gone.

02:55

It's hard to believe

02:56

that at one point in time

02:58

the guano was three to five meters high.

03:03

Now, it's just rocks and sand.

03:07

That guano provided the perfect habitat

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to keep the male and the female

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and the egg and the chick safe.

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Not just from predators,

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but also from the sun.

03:21

Whew!

03:22

It's hot.

03:24

Those thick, black, waterproof feathers

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make it feel like they are wearing a thick winter coat in the middle of a hot summer day.

03:34

It's hard.

03:35

It's hard to watch them

03:37

Their beaks are open.

03:39

They're panting.

03:40

They're really struggling.

03:41

But everything,

03:42

everything in their body is telling them to stay with those eggs.

03:47

It's a horrible dilemma.

03:49

What would you do, if you had to choose?

03:53

Stay, and die of heat stroke.

03:57

Or abandon your chick

03:59

and expose it to predators and the sun.

04:05

Over the last one hundred and fifty years

04:08

people also ate their eggs,

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overfished their food,

04:12

and polluted their habitat.

04:14

To top it off, the climate crisis is disrupting

04:17

the natural balance of the ecosystem they rely on.

04:23

Their numbers have decreased by 99%

04:28

(exasperated sigh)

04:29

Ninety-nine percent.

04:31

In the eighteen hundreds, there were over four million african penguins.

04:36

But today,

04:38

there are only about fifty thousand of them left.

04:42

These beautiful, charismatic animals

04:45

have an important role in the planet's food web.

04:48

As an indicator species,

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they let scientists know the health of the ocean.

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And to South African National Parks,

04:55

they are just as important as elephants and rhinos.

05:00

But we are really close to a point of no-return,

05:03

where they can't be saved.

05:06

In the next few years, we have to work as a team to give them a fighting chance

05:10

or wild African penguins are doomed to extinction.

05:16

Thankfully, there is hope.

05:19

People from a multitude of organizations

05:21

are coming together to use their knowledge and skills

05:24

to save this species from extinction.

05:27

AZA's SAFE program is fostering collaboration

05:31

on a number of projects.

05:32

Including one to give parent penguins

05:34

a safe place to raise their chick.

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To achieve this goal

05:38

researchers first turned to nature for answers.

05:43

Instruments were implanted in some of the last

05:45

remaining guano nests in the world,

05:46

right here, on Bird Island.

05:49

Now this,

05:51

is a natural penguin nest.

05:55

Researchers copied the size and shape,

05:57

but also took it one step further.

06:00

The flag here tells us that the sensor inside the nest

06:03

is currently tracking heat and humidity.

06:06

Once they got the data,

06:08

animal care experts used the information to create

06:10

the ideal artificial nest.

06:14

To learn more, we traveled back to the mainland

06:16

to meet up with Kevin Graham of the Dallas Zoo

06:19

to see how they make this state-of-the-art penguin home.

06:23

Kevin - So after three years of

06:25

research,

06:26

design,

06:26

testing,

06:27

failures,

06:28

and trying again,

06:29

we have ended up with nests that are

06:31

ready to go out to the island.

06:33

Stephanie - Today, a team of locals

06:34

is creating this new design.

06:37

It's about the size of a dog house,

06:39

and kind of looks like an igloo.

06:41

This two-piece design keeps gulls and sunshine out,

06:45

and allows ideal airflow to keep its' occupants cool.

06:49

Kevin - A lot of research went into the design, the shape,

06:52

the size, everything that's necessary to make the

06:54

penguin nest exactly what it should be.

06:56

The materials had to meet very specific requirements.

07:00

The density of the fabric,

07:01

the reflectiveness of the pattern,

07:03

Stephanie - Geeze!

07:04

Kevin - ...the insulative quality...

07:05

Everything had to be perfect,

07:06

and this material worked.

07:08

Stephanie - This special fabric that is used to make roads, has the ability to soak up a liquid ceramic blend

07:15

and when molded correctly, is strong enough to stand the test of time.

07:20

Kevin - We had to find the best way we could copy Mother Nature

07:23

we can't be perfect, we can't be Mother Nature,

07:25

but we've come close.

07:27

Stephanie - They've been able to get it down to an exact science

07:30

and streamline the manufacturing process

07:33

thanks to dedicated conservationists

07:35

like, Trudi Malan, of Dyer Island Conservation Trust

07:39

John Werth, of Pan African Association of Zoos and Aquaria

07:42

and, of course, the team of guys who are

07:45

proud to help their local penguins.

07:49

Kevin - When we've lost 99% of the population

07:52

we can't lose that last one percent.

07:54

Stephanie - What do we do next?

07:56

Kevin - Next is, we go to the island

07:57

and give penguins homes.

08:00

Stephanie - From the nest facility, it's a short drive

08:02

to Addo Elephant National Park

08:04

where we meet up with the rest of the team.

08:07

(helicopter noise)

08:11

Because we have a lot of gear,

08:12

we have a lot of nests,

08:14

and a lot of crew,

08:15

we're gonna have to take a few trips.

08:19

It's a quick helicopter ride over beautiful sand dunes

08:22

and the blue Indian Ocean

08:23

to the tiny rock known as, Bird Island.

08:30

(wind and helicopter noise)

08:40

(happy/exciting music)

08:51

Once unloaded,

08:53

we assemble the two-piece nests

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and label them so researchers and park rangers can track success rates.

09:07

And now it's time to deploy them all.

09:28

(dramatic montage music)

09:35

One by one,

09:36

we clear vegetation,

09:38

face them away from prevailing winds,

09:41
and anchor them down with rocks.

09:44
Once in place,

09:46
the last step is to record the nest number

09:49
along with an exact GPS location.

09:52
Within a matter of minutes,

09:54
penguins are moving in.

10:02
It took many years of data collection, monitoring,

10:05
passion, determination, hard work,

10:08
and conservation dollars to get to this point

10:11
right here.

10:13
We were able to deploy a hundred nests on the island today,

10:16
and we know there's many more to come

10:17
because this is incredibly successful.

10:21
In the morning, Kevin discovers the first sign of success

10:26
(uplifting music)

10:29
Kevin - There's a very freshly laid egg.

10:33
Stephanie - Congratulations, "Penguin Dad!"

10:35
(laughter)

10:36
Kevin - Ah, I didn't do this.

10:37
Stephanie - Ah, I know!

10:38
(laughter)

10:39
Stephanie - Aww... So, this is what it's all about, right?

10:42
Kevin - Well, what it's really all about is healthy chicks leaving,

10:44

but you have to have eggs to get healthy chicks.

10:46

Stephanie - That's right.

10:48

Kevin - She's inside the nest, nice and calm,

10:50

nice and cool, no heat stress at all.

10:53

Just a little over a meter away,

10:55

we've got a bird that's in the exact same temperature

10:58

and is really being bothered by the sun.

11:02

We need more nests.

11:03

Stephanie - We definitely need more nests.

11:06

While this proves the effectiveness of the project

11:09

there's still thousands of penguins nesting above ground.

11:13

With your help, we can deploy homes for all of Bird Island's penguins,

11:18

along with neighboring colonies,

11:20

and save this animal from extinction.

11:26

What an incredible trip deploying a hundred nests.

11:30

As you can see, there are still more nests

11:32

to head over to the island and hopefully,

11:34

with all the help of all of you,

11:35

we can get more out there in the future as well.

11:39

Huge thanks to Addo National Park,

11:41

Bird Island Marine Protected Area,

11:43

the Association of Zoos and Aquariums,

11:45

Dallas Zoo,

11:46

and all of our partners,

11:47

as well as all of our Kickstarter contributors

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for making this happen!

11:53

Whooooo!

11:54

What an incredible journey,

11:55

until next time!

English

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