

Sendung mit der Maus – Kriegen Enten kalte Füße?

Do ducks get cold feet?

In Winter, the frozen pond is a runway.
At least for ducks.

But don't they get cold feet?
It must be freezing cold.

The ducks don't seem to mind the cold at all.

And here are Herbert's feet.

It is so cold
that his feet are hurting.

The ducks don't mind the cold.

They waddle slowly over the frozen pond.

Their thick plumage
protects them from the cold-

as does their layer of fat.

They are well-padded, like in a quilted jacket.

But what about the parts of the body
that stick out?

Like the feet?

Neither padding nor feathers
protect them from the cold.

Herbert wants to solve the mystery.
He's got a thermographic camera.

This camera shows
the warm parts of the body.

Red is hot-

green is a bit colder
and blue is very cold.

When Herbert films the ducks
with this camera-

it looks like that:

The duck's head is quite warm.

But the feet are as blue as the ice
on which the duck is standing.

So the feet are very cold.

This has one huge advantage.

If ducks had warm feet,
the ice would melt-

and they would fall into the water.

When we humans have cold feet,
we put on socks.

Would that be of use to ducks?
Tiny duck socks?

No! Certainly not.

Ducks seem to be comfortable
with their cold feet.

For ducks have a very special body heating.

On its way to the feet
the warm blood is cooled down.

These two hoses exemplify
the blood vessels in the duck's foot.

They are very close.

The blood that runs
through the red vessel to the feet-

is cooled by the cold blue vessel.

On the way back
the blood in the blue vessel-

is heated by the warm red one.

It's a kind of heat exchanger.

When the foot cools down too much,
the vessels widen-

so that more warm blood runs through them.

Humans don't have that ability.
That's why we have to keep moving-

not to be cold.

Ducks just waddle a little or flap their wings-

and they are warm,
even though they have cold feet.