

Transcript

00:00:01:14 - 00:00:23:23

James Shooter

It's early July, and I've escaped the dreary Scottish summer of home and upgraded to a balmy polish one instead. I'm strolling along the banks of the Ina river and wildlife of every kind is erupting out of the vegetation surrounding me. Bees and hoverflies are buzzing from flower to flower. Butterflies in numbers I've never seen before, erupt from every square inch of undergrowth.

00:00:24:00 - 00:00:47:23

James Shooter

And an orchestra of crickets play their tunes from the swaying grasses. White tailed eagles patrol the skies. The ripples of pike and perch disrupt the glassy water surface, and great reed warblers sing out whilst clinging to the stems of reeds. To me, this seems like a natural Paradise, a wealth of life, a place for the all round naturalist.

00:00:48:00 - 00:01:12:13

James Shooter

You'd have as much fun craning up to the skies to see the birds as you would crawling about on all fours amongst the bugs and beetles. But I'm told all is not well. Things have changed, and not for the better. I'm looking around, and surely they're lying to me. My expertise in Polish wildlife, which now stretches to all of 14 hours, says that everything seems hunky dory.

00:01:12:15 - 00:01:39:10

James Shooter

Nothing to worry about. But this is part of the issue, isn't it? How do we sell the fact that nature is in crisis, that we really need rewilding when we look outside and still see wildlife? How many people recognize that it's actually just limping along and it could be so much more? Turning apathy into action is one of our greatest challenges.

00:01:39:12 - 00:02:00:12

James Shooter

Thankfully, there's an army of people attempting to do just that. I'm James Shooter, host of The Rewild Podcast, and this is the Oder Delta.

00:02:00:14 - 00:02:27:20

James Shooter

I'm now stood on a raised embankment overlooking Stettin Lagoon, a huge body of water stretching out as far as my eyes can see. It's 30 degrees, but there's some impressive looking storm clouds moving above, inky blue and reflected perfectly in the calm waters in front of me. I'm here to meet Artur, a Hydro biologist whose work is focused on helping to naturalize the flows of water here to improve the lives of the reed warblers.

00:02:27:21 - 00:02:40:00

James Shooter

The butterflies and the fish. It was the fish, actually, as someone who spent a lifetime trying to catch them. That made Artur notice the changes in the natural world and want to do something about it.

00:02:40:02 - 00:03:14:08

Artur Furdyna

It was the main, the main, factor which pressed me to to look back and, start to think, is it okay to continue this, development of views? Because in the current world, fish has any chance when you compare it with development of tools of sonars and better and better nets, etcetera. Better boats. So the question is to us, we have to reduce our willingness to catch every fish.

00:03:14:10 - 00:03:47:14

Artur Furdyna

We have to leave some space. where they will be able to breed naturally, where they will be able to, react for the whole pressure around. So this is why I turned back and start to work on these conservation issues. I remember, you know, harbor, you have seen, I remember full of, of, boxes with fish, caught fish every day.

00:03:47:16 - 00:04:04:06

Artur Furdyna

Currently, fishermen inform us they have, 50kg, 100kg in one catch one day. So, yeah, it is, it is many times less. Oh! Two white-tailed eagles. It's too many.

00:04:04:06 - 00:04:05:18

James Shooter

I know they're everywhere!

00:04:05:20 - 00:04:20:11

Artur Furdyna

Yeah. it it give illusion that there are so many fish because this is fisher mainly. But the truth is that they are very smart and they will also able to catch the last one. They will see.

00:04:20:12 - 00:04:50:05

James Shooter

Fishing here in the Stettin lagoon tends to be done with gillnets. These are very effective large nets left in place which catch everything that swim into them. For an idea of their effectiveness, a sturgeon tagged for scientific tracking purposes was recaptured four times in three weeks attempting to navigate this minefield. The Oder River valley is a large floodplain that makes up the border of Germany and Poland, up to the coastline of the Baltic Sea.

00:04:50:07 - 00:04:58:22

James Shooter

In this complex ecosystem, you would find alluvial forest, marshlands, dunes, wet meadows, winding rivers and open water.

00:04:59:01 - 00:05:36:05

Artur Furdyna

Historically, after glacier time, this river mouth, was, changing, place and historically, many, many years ago, near 8000 years ago, when the glacier left this, this part of Europe. At first the water level in seas in general was, much lower. So it was maybe 20, meters, down from current level. And then Oder river has mouth near Bornholm Island, but it was changed also few times during centuries.

00:05:36:16 - 00:06:06:03

Artur Furdyna

So in 2000 years, Oder was going to ancient of the river. We have to, not forget. But it was a river, 30, 40km wide and 30, 40, 50m deep. Wow! so it was a little bigger than currently. And, this, level of currents of flows, it was the artist who create this landscape we see now.

00:06:06:03 - 00:06:11:05

Artur Furdyna

Look, grass snake, do you see that? *Natrix natrix*.

00:06:11:07 - 00:06:12:01

James Shooter

Oh, I do see it!

00:06:12:01 - 00:06:24:00

Artur Furdyna

Yeah, yeah, yeah, yeah. I, it is hunting. It is hunting. Looking for something to eat. That's amazing here over. Yeah. So I am waiting to take a picture.

00:06:24:00 - 00:06:29:11

James Shooter

And. Yeah. No way. I can see little fish down there as well. Yeah.

00:06:29:13 - 00:06:30:18

Artur Furdyna

Just looking for fish.

00:06:30:20 - 00:06:57:04

James Shooter

Artur's lived in these parts for 40 years. As such, you might have expected his enthusiasm to have waned, but you can really feel his passion and love for the wildlife and wild systems that make up this place. It's in his veins. He points out every species to me with pride. But there's also a level of frustration, disappointment and sadness when he reflects on some of the losses here, one of which was a monumental mass fish die off just two years ago.

00:06:59:16 - 00:07:14:17

Artur Furdyna

This situation is still going on, right? Okay. Every warmer, weather, every lower water we have next dead fish, of course it will be not hundred tonnes like it was first time because river is empty.

00:07:14:19 - 00:07:18:12

James Shooter

So it's a massive pollution event. Yeah. Well, what what happened? Was it,

00:07:18:14 - 00:07:49:00

Artur Furdyna

You know, this is partially it is, mix of bad things there's this pollution from mining companies, this is pollution from, huge industry chemical. But not only, also farming, okay. Farming, this, this, you know, outflow, runoff, fertilizers also have things and also small, sewage plants not working like it should. Okay. In the end, was connected with very low flows.

00:07:49:03 - 00:07:50:02

Artur Furdyna

Yeah. You know.

00:07:50:04 - 00:07:51:05

James Shooter

So it's very concentrated.

00:07:51:05 - 00:08:08:17

Artur Furdyna

Yeah. And so thanks to this explode the algal bloom, strange kind of alga which shouldn't exist in Oder river and freshwater. But when you check the salinity and you find the same level, like in sea.

00:08:08:19 - 00:08:09:05

James Shooter

Yeah.

00:08:09:05 - 00:08:13:14

Artur Furdyna

Well, so it was very good conditions for, for this catastrophe.

00:08:13:22 - 00:08:22:00

James Shooter

and was it that set, was it the secondary effect of the algae that was, that was the big killer of fish and things or was it pollution and that?

00:08:22:00 - 00:08:49:04

Artur Furdyna

I think. Yeah. It's because there's a strange, toxin. It was, only for ichthyofauna and bivalves. Mussels. Yes. Yes, because it is, it was attacking the breathe system. Okay. so it was a special situation that it was thanks to, too high oxygen in water. Right? You know, but at the same time, next, everything was, damaged all cycle.

00:08:49:08 - 00:09:01:24

Artur Furdyna

Yeah. Life in the river was, because it was, tons of, you know, of of dead fish bodies in the river. What? Start next blooming and next blooming.

00:09:02:01 - 00:09:03:09

James Shooter

A big a vicious circle.

00:09:03:09 - 00:09:04:22

Artur Furdyna

Basically. yeah.

00:09:04:24 - 00:09:07:06

James Shooter

But it is recovering now?

00:09:07:08 - 00:09:29:08

Artur Furdyna

Oh, it's we we have signals from many places at the same time, so, but at the same time or, it makes us, more focused on smaller rivers where it is still possible. Yeah. To have better quality of water. Yeah. And thanks to this, it is some kind of refuges.

00:09:29:10 - 00:10:06:10

James Shooter

The issues that led to this catastrophe where over 300 tons of dead fish were pulled from the Oder, are complex. Alongside the troubles in the rivers, a new shipping channel created in the lagoon has created untold changes to the water body itself, but probably had a hand in the changes in water quality upstream too. Dreddging the channel out so that it was deep enough to carry cargo ships meant a large amount of existing pollutants in the sediment were stirred up, whilst the natural entrance to the sea was twice widened and deepened, which allowed more seawater into the mix and changed the salinity for good.

00:10:06:13 - 00:10:21:02

Artur Furdyna

We have rising sea level. Yeah. Rising storm, these peaks. Yeah. And we open mouth. So is it for me, it's idiot's work.

00:10:21:04 - 00:10:24:03

James Shooter

So what? What's what's the solution here?

00:10:24:03 - 00:10:25:05

James Shooter

It seems like a massive.

00:10:25:07 - 00:10:27:18

James Shooter

A huge, huge, huge problem.

00:10:27:21 - 00:10:54:16

Artur Furdyna

I don't know I don't know. Currently we have new ecosystem. Let's see. Yeah. What's happened. The problem is that, you know, a responsible group is free. People did here, you know, murder on existing ecosystem, currently we have new one right. And my question is for whom and who will take profits?

00:10:54:18 - 00:11:00:21

James Shooter

That's depressing! You know, such a big body of water, such a big ecosystem.

00:11:01:05 - 00:11:10:14

Artur Furdyna

To be honest, I see any positive side of this. I spent all my life to stop this catastrophe, and nobody heard.

00:11:10:14 - 00:11:11:16

James Shooter

And it still happened.

00:11:12:03 - 00:11:21:06

Artur Furdyna

It's still happened, when you look deeper is. I have bad feelings, so I feeling myself as a witness of catastrophe.

00:11:21:07 - 00:11:22:11

James Shooter

Yeah. I knew it was coming, tried to stop it.

00:11:22:11 - 00:11:36:19

Artur Furdyna

We were still. Scientists were saying this. Such guys like me. I was, sending a lot of, comments to this plan by more than ten years earlier.

00:11:36:21 - 00:12:10:22

James Shooter

Further inland, this wetland region has escaped the most intensive agricultural practices because of poor soils. But it still faces much of the same changes wherever we try to control water to suit our needs. River channels have been deepened and straightened, drainage ditches have been cut and embankments built up to try to dry out the flat riverside meadows, primarily for hay cutting. The gravel bed rivers have been stripped of their substrate for use in construction, which has removed the spawning grounds for a number of species of fish, and to help lower the water levels in the channels.

00:12:10:24 - 00:12:26:19

James Shooter

This has had an even more of an impact, with hotter summers, meaning even less water to play with. To add further impairment to the situation, historic dams and weirs built for water wheels for milling flour were dotted along almost every arm of river and tributary in the region.

00:12:26:23 - 00:12:34:22

Artur Furdyna

Next, some of them were turned into the, like hydro, small scale hydro, electro, electro.

00:12:34:24 - 00:12:36:19

James Shooter

Yeah, power and in the same places?

00:12:37:01 - 00:12:59:19

Artur Furdyna

yeah. Yeah, because the construction is already there. So we are meeting here a lot of ruins of weirs because currently, thanks to our changes in old catchments, we have less and less water. Yeah. thanks to this, it is not enough water to, to supply, you know, any energy production or different, other things.

00:13:00:06 - 00:13:29:09

Artur Furdyna

but at the same time, we have less water, not enough water for, for for fish, for ichthyofauna and other invertebrates, etc.. so we are trying to, turn back, stretches of the river. It is, you know, expensive, but, every such stream. It is next, spawning ground for ichthyofauna especially for sea trout, brown trout and lampreys.

00:13:29:11 - 00:13:48:19

James Shooter

Having had my eyes opened to some of the challenges faced by the rewilding team here this morning, I'm grateful to have been taken to some hopeful scenes further upriver, where a man in a digger is slowly returning the tributaries to a more natural state. Manmade barriers have been removed by opening up disused weirs, and gravel is being returned to the riverbed.

00:13:48:21 - 00:14:08:10

James Shooter

It may seem like a simple action, but this initiative will bring huge positives to the productivity of these once rich waters. The channel here is only a few meters across. I reckon I could probably leap it with a bit of a run up, but I probably won't attempt it just in case I'm wrong and my microphone's end up in the drink. If the podcast ends here now, you know, I probably did try it and it didn't go well. To the untrained eye, you might question the importance of such a small watercourse for fish, but it's precisely the lack of size that gives it an advantage. Here, survival of juvenile salmon into smolt, the life stage at which they migrate out to sea is about 20%.

00:14:30:14 - 00:15:00:10

James Shooter

That doesn't sound very high, I hear you say. Well, on the main river that goes down to about half a percent. Here, with shallower waters and obstacles to pass, there are pretty much only salmonids present, that's salmon and trout, alongside lamprey and the odd European bullhead, which sounds scary, but is about the size of your thumb. On the main river stretch, there's about 30 species of fish, that's a lot more hungry mouths that might have a taste for young salmon. This is why the smaller tributaries and the recovery of gravel beds within them is so important.

00:15:06:07 - 00:15:23:15

Artur Furdyna

We are planning this this, planned by design office calculate, so everything here has papers, design. It has to go in this way because it is not so easy, it looks, you know, kids, play but not it's not.

00:15:23:16 - 00:15:25:04

James Shooter

It's a lot of planning at the start.

00:15:25:06 - 00:15:54:10

Artur Furdyna

Yeah. And to, raise the bottom effectively to open passibility for fish for, for ruins of weir, which we are not able to remove at to zero because, it's changed also the, water, groundwater level. So we have to rise step by step, but still to, to keep this, passibility. Yeah, yeah.

00:15:54:11 - 00:16:18:21

Artur Furdyna

So, you know, you have to we you see, we are, 300 hundred meters from the weir ruins we are starting, and then we are create very, very long, let's say ramp. Yeah, yeah, yeah. creating also some, deeper parts, like in natural river where you have shallow water, and then you have deeper part for, fish heights, etc..

00:16:18:23 - 00:16:24:20

James Shooter

So it's adding structure, it's adding habitat and it's also making it shallower.

00:16:24:22 - 00:16:38:01

Artur Furdyna

At the same time we recreate the, how to say, stretches with better conditions for group of species need gravels.

00:16:38:01 - 00:16:38:10

James Shooter

Yes.

00:16:38:10 - 00:17:08:15

Artur Furdyna

Yeah. Survive. So it's just a lot of invertebrates. It is, lampreys which use these gravel, parts, to do the breeding. Okay. Like salmonids and, Yeah. So at the same time, there are some plants which prefer these gravel structures in this water crowfoot river group and, yeah, there are a lot of, parts of nature which for, which need this gravel bottom stretches.

00:17:08:15 - 00:17:16:14

Artur Furdyna

Without this, you have poor, really poor, situation and, you have not full habitat. Yes.

00:17:16:14 - 00:17:19:18

James Shooter

Yeah, yeah. So how much, how much gravel has to come in for this?

00:17:19:21 - 00:17:22:20

Artur Furdyna

Here? 700 tons of gravel.

00:17:22:21 - 00:17:23:19

James Shooter

That's a lot of gravel.

00:17:23:19 - 00:17:51:12

Artur Furdyna

Yeah, yeah. So yeah, it is a lot. Yeah. This is very small stream in Ina river for one prism. Yeah. We are using the same really. Yeah. I'm also fuel. Yeah. It's fuel. It was. We were doing such action some years ago. It 2021, it ate 3000 tonnes of gravel for six prisms.

00:17:51:12 - 00:17:52:15

Artur Furdyna

Really?

00:17:52:17 - 00:18:14:08

James Shooter

A prism in this respect is one length of gravel restoration with the undulating features that give both shallow and deeper areas of riverbed for spawning and resting. Female

salmonids slay their eggs by wafting their bodies above the substrate to cause a depression. Lay their eggs inside as the males fertilize them, and then covering them again with gravel. It's a neat little nest called a redd that offers both protection from predators and also oxygenation from water rippling through. Sandy substrates are no good for these nests, as the eggs would be smothered.

00:18:27:09 - 00:19:08:21

Artur Furdyna

Some, some effects, you can see very quickly, for example, with lampreys, we saw lampreys using this new construction, new ramp the same day when the water start to be again clean. We saw some lampreys traveling upstream. Yeah. And often, when we were finishing some, some activities where closely to the spawning time. We saw sea trout, using our, gravels because the, not the main course, but one of the, profits when you build such structure is that fish quickly use it as a spawning grounds.

And here effects were seen very quickly. But, next weeks, months, we saw, for example, rare plants also appearing on these places because it just proved for us for me. But, in this channelized river, the biggest problem made by human, by strengthen it or, deepened it was, to reduce these shallow places which raised over the main slope, which was very good place for water plants. Important water plants like water crowfoot. It was it was yeah, it was, easy to see in next month.

00:19:53:02 - 00:19:53:12

James Shooter

Wow.

00:19:53:12 - 00:19:54:18

James Shooter

So brilliant results.

00:19:54:18 - 00:19:55:08

James Shooter

Kind of straight away.

00:19:55:09 - 00:20:09:10

Artur Furdyna

Yeah. Yeah. Good indicator is a fantastic indicator of of, very important, nature side to this is this water crowfoot river, after these activities, we saw huge development of site.

00:20:09:12 - 00:20:32:17

James Shooter

We leave the small woodland tributary and move on to a larger part of the Ina river, where sections of gravel restoration have already been carried out and settled in. Corn buntings are jangling from some of the isolated trees amongst the meadows, and water crowfoot is hanging in the water column. This aquatic flowering plant of the buttercup family forms mats on the water surface and is a really good sign of high-quality water.

00:20:32:19 - 00:20:45:16

James Shooter

A tractor passes us on the way in, ready to harvest some of the fields for hay. It's not cut too regularly here, so the riverside meadows are full of flowers and full of life, at least to me.

00:20:45:18 - 00:20:49:11

James Shooter

I mean, just the amount of insect life here though is amazing. Yeah.

00:20:49:11 - 00:20:56:00

Artur Furdyna

Butterflies everywhere. Yeah. Oh, that's, you know, I mean, for me, I remember it was much more.

00:20:56:01 - 00:21:00:09

James Shooter

Yeah. it must have been deafening. Like, the sound.

00:21:00:09 - 00:21:25:02

Artur Furdyna

It is only, small hills like this, you know, you have still here healthy valley. This is a floodplain which was covered by water few months during this winter, you know, they only use it is closely to pastures. Yeah. It should be pastures. Yeah. So, the only problem is that river is too deepen.

00:21:25:06 - 00:21:25:21

James Shooter

Okay. Yeah.

00:21:26:13 - 00:21:27:15

Artur Furdyna

And too narrow.

00:21:27:17 - 00:21:48:15

James Shooter

Here, we're joined by Maciej for a walk along the river. An ecologist, ornithologist and colleague at the rewilding Oder Delta team who has instantly found as a star find of a white tailed eagle feather. A fine prize. And if I could take it all the way back to Scotland undamaged, I'd be adding it to my feather collection. Oh, yes, I am that cool.

00:21:48:17 - 00:21:55:05

Maciej Sawicki

Those meadows are full of corn crake, like you. Oh, really? Yeah. It's quite a good place for corn crake.

00:21:55:05 - 00:21:56:05

James Shooter
Oh, amazing.

00:21:56:07 - 00:22:23:21

Maciej Sawicki

But, sometimes you can even hear them, during the day, like, now, the crex crex. Actually, we used our canoes last year, and we had a boat from the bridge over there to another bridge. It's about seven kilometers in the distance. You had 12 males. Wow. So it's a good place because, in private meadows or in more intensively meadows.

00:22:23:21 - 00:22:49:20

Maciej Sawicki

They they they cut them. They when they mow. Yeah. And they, kill them. Yeah. You know, here, probably here, is the same story, but I think they have they have more success with, in the, with breeding here because it's like, you see, some parts are still not mowed and they are already mowing and I'm already starting in June.

00:22:49:24 - 00:22:50:17

James Shooter

Yeah. Okay.

00:22:50:17 - 00:22:57:10

Maciej Sawicki

But probably they can go to another part to, you know, to it even the chicks are big enough. Then they can then.

00:22:57:15 - 00:23:00:15

James Shooter

As long as they start mowing later in the year, it's it's not as bad.

00:23:00:18 - 00:23:05:01

Maciej Sawicki

For corn rake it would be best if they mow in August.

00:23:05:03 - 00:23:26:16

James Shooter

Corn crakes are beautiful little birds in the rail family. They look a bit like a slimmed down partridge, but you never really see them. They're very elusive and tend to stay hidden in tall hayfields. The males sing from their hiding spots in spring, which makes them easy to count, and I use sing in the loosest sense of the word here, they sound a bit like an 80s radio alarm.

00:23:27:00 - 00:23:53:02

James Shooter

And it would be annoying enough to get you up in the morning anyway. They're migratory, and having flown all the way from Africa to breed in Europe, they then face the blades of mowers as they attempt to nest, which are cutting increasingly early hay

and silage. Like other ground nesting grassland birds like the curlew and the lapwing, they've suffered steep declines in Western Europe, in part because of modern farming practices.

00:23:53:04 - 00:24:16:07

James Shooter

Maciej tells me there are subsidies on offer which are paid out to farmers to protect corn crakes if they're willing to avoid mowing until August. But there are also payments for snipe, which are better paid and allow mowing from June. So most people just take that. As an ornithologist, he sees no logic behind this plan. Government policies are strange beasts, especially when it comes to environmental ones.

00:24:16:09 - 00:24:19:19

James Shooter

Please can someone open the door and let some common sense in?

00:24:19:21 - 00:25:02:02

Maciej Sawicki

We do also, we work with amphibians and we use umbrella species like great crested newt, for example, protecting the species, specifically the great crested newt, for example you can protect much larger spectrum of, of other species and habitat. Great crested newt is one of the most protected amphibian because if you have this species on your land or specifically on your in your area, then you have more, a possibility to protect your area.

00:25:02:02 - 00:25:07:05

Maciej Sawicki

And that's, that's our, manner of, of, of working and thinking.

00:25:07:07 - 00:25:33:18

James Shooter

Great crested newts turn up on a number of countries red lists, meaning they're not faring too well, they've suffered declines due to habitat destruction through urban encroachment and agricultural intensification. They're not very good at dispersing, so when habitats are fragmented, they aren't able to reach new grounds. They act as a great ambassador for protecting and restoring bodies of water, which then go on to provide vital habitat for a variety of other species.

00:25:33:20 - 00:26:02:21

James Shooter

Water is life, after all. Yes, they're rare. And yes, they're a great umbrella species. But to be honest, they should probably be saved for the sheer flamboyance of their breeding cycle alone. Males will display in courtship arenas known as leks, just like black grouse or capercaillie do, but on the pond floor instead. They wiggle their bodies, flap their tails, and if a female stops by to see who's got the best moves, they waft some pheromones to her to entice her in.

00:26:02:23 - 00:26:29:13

James Shooter

If he's successful, he drops a spermatophore, a packet of sperm and guides the female over it, where she picks it up with her cloaca. The female then takes great care to lay individual eggs and folds them into leaves of aquatic plants. If you thought the salmon redd was fancy, this is a whole other level. Each egg takes around five minutes to lay and house, and she can produce as many as 200 per season.

00:26:29:15 - 00:26:58:06

James Shooter

And my fast maths tells me that's roughly 16.66667 hours. No, I didn't use my iPhone. You can't see me, prove it. The young larva hatch from the eggs and look quite alien like. They're almost fish like, in shape, goby-esque almost, but with their external gills look like they have a bit of coral stuck to their heads on the top side, with dangling forelimbs on the bottom side.

00:26:58:08 - 00:27:22:16

James Shooter

After several months of growing, they reabsorb their gills and metamorphose into terrestrial juveniles called efts. As you do. The efts, which now breathe through freshly developed lungs, then leave the water and head off to the forest. I mean, if all that's not worth saving, I don't know what is. Nature huh?! Something new always manages to blow your mind.

00:27:22:18 - 00:27:54:16

Maciej Sawicki

So we work with with the States forest and, with the farmers. And what we see is that it's very important to not to drain and to keep the water in the ditches and also to, yeah, to use the beavers and to let them do their work. So to build, to keep the dams on the place, not to remove the beaver dam.

00:27:54:16 - 00:28:09:13

Maciej Sawicki

So those are all the examples that are very important to keep the water levels as high as possible in spring, so that all these species can thrive. You know.

00:28:09:15 - 00:28:30:10

James Shooter

It's a pretty good area for beavers in the Oder delta, with family groups found across much of the river catchment. Some of the farmers aren't too keen on their presence. To them, partially flooded fields are areas that can't be mown and sold for hay. But with climate change making the seasons drier, the Beavers are actually going to help as they allow groundwater levels to be kept high.

00:28:30:12 - 00:28:49:22

James Shooter

In times of drought, you really don't want to have gotten rid of nature's water retainers. These river valleys would once have been great carbon stores before they were drained, which, of course, is something that governments are increasingly paying out for nowadays in a strive to reduce CO2 emissions. So it's worth getting behind Team Beaver.

00:28:49:24 - 00:29:26:13

Maciej Sawicki

The local meadows are drained peatlands, so they already lost their functions, specifically its about the function of removing CO2 from the atmosphere. Also their ecological function says, for example, habitat for endangered species and also the water retention functions or the ability to self purify water. So that's what we want to do in the future, rewetting is one of the best solution in our mind. There are projects now, on governmental level, and they are working on a system that can give this possibility.

00:29:26:13 - 00:29:37:10

Maciej Sawicki

So the farmers will kind in. You can see this in the kind of, subsidies. I think one year from now it should be ready.

00:29:37:12 - 00:30:00:05

James Shooter

We've been in these meadows only 30 minutes or so, and I've seen 4 or 5 white tailed eagles going over. It's one of the densest populations of this apex predator found in Europe and is a testament to the amount of life still found here that can support such numbers. Maciej tells me in the winter months you can easily find hundreds of thousands of wildfowl like greater scaup.

00:30:00:07 - 00:30:04:19

James Shooter

Making use of Stettin Lagoon and numbers like that don't go unnoticed.

00:30:04:21 - 00:30:37:00

Maciej Sawicki

So a lot of food, very important migratory path in Europe and also a very important wintering place. And of course, it has to be said that there are, of course, old forests in the area. So they need, of course, they are quite, sensitive for, disturbing in the, during the breeding season. So they need peace.

00:30:37:02 - 00:30:49:20

Maciej Sawicki

Yeah. You know, and they of course need big trees to build their nests in it though. So, all these elements that, are crucial for white-tailed eagle.

00:30:49:23 - 00:30:53:05

James Shooter

And do they hold a territory, you know?

00:30:53:07 - 00:31:14:08

Maciej Sawicki

Yes, of course, they even what we see every spring, these are the males are fighting each other until the deaths. Yeah, yeah. Every year we found males almost dead or seriously injured here.

00:31:14:10 - 00:31:16:06

James Shooter

And what do they do? They grab each other in the sky.

00:31:16:06 - 00:31:42:24

Maciej Sawicki

Yes. They fight for the claws with their. With their claws. And they take each other in the sky and they fight just for their territory. also, the young males try to take the, the nest, you know. So one of the quite common things we see are old males that are almost dead. We found them, under the tree where the where the nest is.

00:31:43:01 - 00:31:48:02

Maciej Sawicki

Wow. I saw already some birds like this hole open.

00:31:48:04 - 00:31:50:17

James Shooter

And fly, and they can really do some damage.

00:31:50:18 - 00:31:51:21

Artur Furdyna

Yeah. Of course.

00:31:51:23 - 00:32:16:11

James Shooter

These huge birds, the fourth largest species of eagle in the world, have a crucial role to play in an ecosystem. As a top predator, they regulate their numbers and overall health of their prey, removing weak, sick and old individuals from the population. In winter, they often turn to feeding on carrion and so form part of the cleanup crew, reducing the risk of disease spreading from carcasses left in the landscape.

00:32:16:13 - 00:32:37:01

James Shooter

They're a great indicator for how healthy your ecosystem is, and as a highly visible species, they are a wonderful ambassador for the region and a sure favorite of tourists, birdwatchers and photographers alike. From the big to the small, the diversity in birdlife of the Oder Delta is impressive and tentatively improving all the time.

00:32:37:03 - 00:33:05:18

Maciej Sawicki

And the second species I wanted to talk about is the aquatic warbler. So they are extinct. I think the last ones were singing in 2013/14 that we can then observe, and from then they were gone. But there is now a reintroduction project. So they take whole nests in the eastern Poland They go, they drive them to, western Poland.

00:33:05:19 - 00:33:41:10

Maciej Sawicki

Then they feed them till they are big enough, put them into the cages for, adaptation, on place where they will be released. Maybe a week or something. And then they release them and they fly to Africa, Eastern Africa, and there where I know a few birds that that came back there this spring. So it's a success, but it's too early now to say if it will be a success story.

00:33:41:12 - 00:34:15:01

Maciej Sawicki

So what we need is, again, rewetting. That's why I was talking about this species. So we for sure need more, space for, for water and of course, all these advantages, you know, is that if you rewet peatlands, they can function again and they can capture, CO2 from the atmosphere. So all this, and there are a lot of arguments to rewet.

00:34:15:03 - 00:34:37:19

James Shooter

The sun's high in the sky now. And thankfully, someone's mentioned lunch. The team take me to one of their local business owners they work with. It's another lovely spot by the river, which makes sense as they do a lot of kayaking trips. We're brought out freshly baked bread, still warm in the middle, and vegetable stew. I also get handed a bottle of some radioactive looking drink.

00:34:37:21 - 00:34:54:14

James Shooter

It looks a bit dangerous to me, but I'm too thirsty to care. It's a bit like irn bru with a lot more zing. I sit down with Magda, the tourism and enterprise officer, for a chat about connecting nature with people. Agnes, the communications officer, translates for us.

00:34:54:16 - 00:35:25:14

Agnieszka Soboń

So we're aiming for, the businesses not only to be sustainable, but to look for, regenerative ways, of doing the business, the rewilding Oder Delta landscape is in, fairly good ecological state. So, we can still be promoting business development, based on natural resources, but without causing the harm to the environment.

00:35:25:16 - 00:35:36:22

Agnieszka Soboń

So we see our role as a supporting role as an expert advice, proposing nature based solutions. And the place that we are here right now is a great solution for that.

00:35:37:02 - 00:35:59:08

James Shooter

Lukasz, who runs this place, is obviously well bought into the combination of rewilding and business. He's recently updated his logo to a beaver kayaking down the river. I'm sold. Take my money. He's also worked with the rewilding team to display one of their impressive information boards, so that guests and visitors can learn about sustainable businesses and the local environment.

00:35:59:10 - 00:36:27:09

James Shooter

More importantly, ventures like Lukasz's is a completely reliant on a healthy and functioning ecosystem. I'm not sure many would like to go kayaking along rivers smothered in blue green algae with dead fish bobbing by. No, they want their experiences to be full of joy and wonder. They want to hear the tail slap of a beaver and a chorus of moor frogs to watch, swallows swooping down for a drink from the river and perhaps get splashed by a Big momma pike.

00:36:28:12 - 00:37:00:20

Agnieszka Soboń

The big seven of the rewilding Oder Delta is the beaver, the bison, the wolf, elk, grey seal, the sturgeon and the white tailed eagle. And we are very proud of those species. But we are also very proud that the biodiversity of the region is much more robust. These are definitely the species that are attracting nature photographers, and people that are interested in ecology. Being iconic species

00:37:00:20 - 00:37:30:09

Agnieszka Soboń

they are very good base, for the awareness campaigns, to bring some knowledge about those species coming back and the way we can coexist with them. Another area of focus would be how do species play an important role? They play an important role in the conversations, with forestry departments to make sure that we can collaborate and provide the best, habitats, possible for those animals.

00:37:30:11 - 00:37:38:13

James Shooter

Is there a favourite amongst tourists here? Does it bring people in specifically to see a wolf, or an elk, or a sturgeon?

00:37:40:02 - 00:38:09:16

Agnieszka Soboń

So our idea is that it's not just one species that is the most attractive, but the the treating the ecosystem as a whole and just possibility of encountering the animal trace like we saw today by the Ina river, finding the beaver tracks are equally attractive, and, can give a sense of being in a very, rich landscape.

00:38:09:18 - 00:38:10:18

James Shooter

Very good answer.

00:38:10:20 - 00:38:44:19

Agnieszka Soboń

So all the encounters with the wildlife are exciting and in my view, it's seeing bison in the forest is exciting, but it's as exciting or even not more exciting to see a salmon in the river and be able to do a so-called salmon walk and walk by the river seeing the fish, seeing fish in it, can be also a very moving experience, especially when you see it as a result of the nature conservation work that we do

00:38:44:19 - 00:38:49:08

Agnieszka Soboń

and they appear in the places that we worked on to bring the nature back.

00:38:49:10 - 00:39:15:07

James Shooter

In the 1990s, there was big political change in Poland as it turned its back on communism and transitioned to a democracy. Smallholdings were offered tax incentives, and these small businesses were able to diversify and start offering agritourism with local food and local services at the heart and ran by local people. Whilst these subsidies have changed again over the years, it's the same principles that Magda wants to tease out and work on once again.

00:39:16:12 - 00:39:50:14

Agnieszka Soboń

Our networking, and educational and raising awareness work is also very focused on the local governments to make sure that they are aware that they are aware, to have the power to really, have impact on decisions, how the environment in the area will be treated or used.

00:39:50:16 - 00:40:05:07

Agnieszka Soboń

And, this way making sure that, the local people are empowered, we can, be more sure that it will be taken care of rather than when the decisions are made far away.

00:40:05:09 - 00:40:28:15

James Shooter

National politics is always a fickle thing, particularly when it comes to the environment. An individual in the right or wrong place in the political hierarchy can really help or hinder progress. With the last government of Poland, Magda tells me, there was little chance for dialog. But with more recent changes to the establishment, the team were invited to discussions with some of the statutory bodies.

00:40:28:17 - 00:40:39:15

James Shooter

Knowledge exchange is so crucial to help move the conversation along, especially when people on the ground, in the field, getting their hands dirty are asked for their expert opinions.

00:40:39:17 - 00:41:24:22

Agnieszka Soboń

Participation in different events or organizing different events, or, expert, knowledge, exchange, groups meetings always goes back to the same basics, which is education, awareness and communication and we hope that by, by all our activities, by all that we are doing, we will be able to influence the decision makers, to make more environmentally positive decisions that can have a big impact on, on the state, on on of the environment and actually of the well-being.

00:41:24:22 - 00:42:01:19

Agnieszka Soboń

And, in the local community. We are organizing different kinds of educational events, be it nature walks, outside for different groups of stakeholders from the primary school students, to tourists to the water administration, to the local government, or actually just local people that, are interested or have the potential to be interested in their surrounding, to be more, careful of where they live and to be able to appreciate it more.

00:42:02:13 - 00:42:21:06

Agnieszka Soboń

Because we believe that once this education and this awareness is raised, it is it can be a source of, maybe a local pride and people really wanting to share the abundance of the landscape with others.

00:42:21:08 - 00:42:48:05

James Shooter

There's nothing more powerful than igniting a fire and letting it burn. I mean this figuratively, rather than literally by the way, just to point out that I'm not encouraging arson. Magda has organized tree planting events and river cleanups where local volunteers get together to create natural habitat and remove plastic waste from their waterways. The team were then thrilled to discover that the local community has started arranging further cleanup crews amongst themselves.

00:42:48:07 - 00:42:53:20

James Shooter

Sometimes it just takes someone to light the match, again, figuratively.

00:42:53:22 - 00:43:30:10

Agnieszka Soboń

I hope that people will come to the awareness that landscape forms part of their identity and is also source of their well-being, and we do it by, we hope to do it by really crafting, and inspiring messages to bring a positive, bring positive information to people so they feel moved, to work, towards the same goal with us.

00:43:30:12 - 00:43:46:09

James Shooter

I get back in the truck with Artur and Agnes, as they want to show me one final section of their landscape before I leave. I'm told they've saved the best for last. Intriguing. We get out amongst the shade of alder woodland and start walking to the main river channel.

00:43:46:11 - 00:43:48:09

Artur Furdyna

Here is one of our prisms.

00:43:48:18 - 00:43:55:06

James Shooter

one of your prisms that you put in. and that's just the sound from the prism. Yeah. All right. Okay, so the good rapids.

00:43:55:08 - 00:44:01:22

Artur Furdyna

But at the same time, thanks to this prism here, you can see the Paradise.

00:44:01:23 - 00:44:03:01

James Shooter

Oh, this is beautiful.

00:44:03:01 - 00:44:20:21

Artur Furdyna

Every old arm is full of water still. Wow. So here is our effect of our work. But here we've been allowed to do what we want. Here is maximum what is possible in this landscape.

00:44:20:21 - 00:44:29:20

James Shooter

It's stunning. This is an amazing visual, actually, to show me what the, you know, closer to the final stage should look like for this river system.

00:44:29:23 - 00:44:44:23

Artur Furdyna

This is, you know, this river is just like from the book for geography and hydrologists. Yeah. how, natural lowland river should work. So here you can see.

00:44:45:02 - 00:44:46:19

James Shooter

It's like a little Paradise, though, isn't it? You got.

00:44:46:19 - 00:44:51:23

Artur Furdyna

Oh kingfisher!

00:44:52:00 - 00:44:52:12

James Shooter

Oh I hear it.

00:44:52:14 - 00:44:55:11

Artur Furdyna

Yeah, yeah. it has nest over there. Yeah.

00:44:55:16 - 00:44:59:02

James Shooter

So that was well timed describing it as Paradise.

00:44:59:04 - 00:45:00:14

Artur Furdyna

Yeah.

00:45:00:16 - 00:45:28:07

James Shooter

Kingfishers piping, golden Orioles fleeting, banded demoiselles dancing in the sunlight. Golden ring dragonflies hovering and hunting. This place is an oasis. I've been taken on a personal journey here. From ground zero in the morning, where gravels are just going back in to semi wild meadows, rich in life but still limited in reaching their full potential due to a network of embankments and hay still being cut.

00:45:28:09 - 00:45:49:08

James Shooter

And then to this green and verdant river valley. Here, rewilding Oder Delta have been given more room to work their magic thanks to a sympathetic collaboration with the state Forest department, which owns the land. Here the prisms have been in place for some time now, and there are no embankments to stop the water spilling out of its channel.

In times of high flow and interacting with its floodplain. As it should. Woody debris adds diversity to the watercourse, with naturally fallen riverside trees, boggy pools and wetlands offer respite from the rapids, and rich aquatic vegetation brings more life and structure to the underwater ecosystem. On one side of the main channel, you have alluvial forest where alder trees are stood knee deep in water and beavers have cut submerged channels amongst the undergrowth.

On the other swampy meadows that get flood waters throughout the winter months, they have an incredible diversity of wildflowers and tall herbs, which in turn have a huge array of butterflies clambering all over them to feed on the bounty of nectar. I wish you could see this place, because it really is the perfect depiction of why nature needs space.

If we give it room to breathe, the ability to pulsate throughout the seasons, unrestricted, untamed, we'll be rewarded with a richness of life we've almost forgotten. And yes, there's all the arguments of carbon storage and flood mitigation to go with it. The

incredibly important, but sometimes slightly boring reasons for saving nature. Reasoning with people on logic doesn't always seem to hit home. For some reason. They're not swayed by arguments of clean water to drink and air to breathe. But there's also the argument for saving nature, for rewilding, purely because it's just bloody lovely. And that's as good a reason as any.

Outro

Thanks for listening to episode 17 of The Rewild Podcast, the penultimate episode of the season. Yikes! A huge thanks goes to Artur, Maciej, Magda and Agnes for your time in showing me around and to Lukasz for your hospitality. It's been an eye-opening trip with loss and recovery. If you're in the UK and fancy finding out about our European rewilding adventure as a whole, I've an article in this month's BBC Wildlife magazine where they've let me ramble and rant for ten whole pages about the trials and tribulations of our incredible journey.

Pick up a copy and let me know what you think. I'll also be talking at this year's Big Picture conference in Perth. That's Perth, Scotland, not Perth, Australia. There's a great lineup of speakers from across the rewilding spectrum, so check out Scotland The Big Pictures website for details and tickets on that. As always, thanks to Andrew O'Donnell of Beluga Lagoon for the tunes and Gemma Shooter for the great episode artwork.

The biggest of thanks goes to Rewilding Europe for collaborating with me on this series. This is an organization making positive change on the ground. Next month, and our final episode of the series, will be from Swedish Lapland. One of Europe's last great wilderness areas. I'm excited for this one. So do join me then as we explore the Scandinavian subarctic.

Catch you next time, for the last hurrah.