Less is Amur

How might you reintroduce the Amur leopard to the wild? With patience, thoroughness and the help of several well-trained Russian vets

Reintroductions. You may be familiar with the concept from various headlines in UK papers over the years. These are the attempts to bring back a species to a region where mankind, as often as not, has previously made it extinct. Back in the 1970s it was the large blue butterfly that drew attention as conservationists reinstated it in the West Country. In more recent years we've had great bustards put back onto Salisbury Plain. Beavers are due to get a similar treatment in 2009, and the Eurasian crane is at the beginning of a long-term reintroduction plan at various sites in the country.

The one thing they all share is that, although these species have lost their foothold in an area or nation over the years, they're still reasonably plentiful elsewhere, so that there's plenty of stock to choose from for the reintroduction plan. If the project works, that's great. If it doesn't, you can always review your mistakes and have another go down the line.

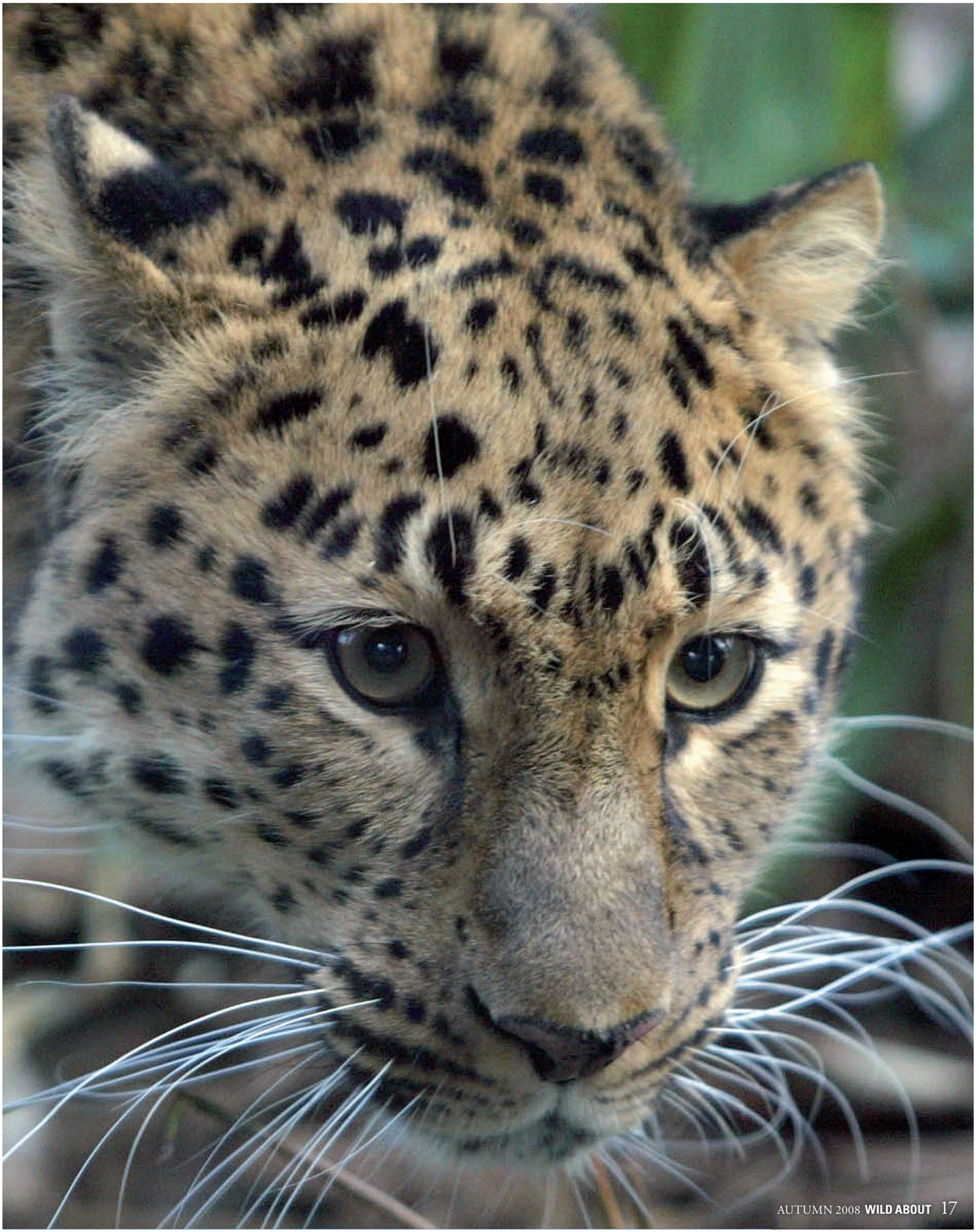
In the case of the Amur leopards, such luxury cannot be afforded. They're so critically endangered, that there barely is no 'down the line'. There aren't thousands of Amur leopards, there aren't even hundreds of them. These animals, which once roamed the Korean peninsula, reaching north-east China and the Amur river on the Russia-China border, are now down to their last 30-35 individuals in the wild, all virtually huddled together in south-west Primorski Krai in the Russian Far East. It's the big cat with the tiny population.

As is so often the case, it's mankind that has brought them to their knees. The forests that once provided them with huge tracts of land to live in have been so extensively logged that much of the leopard's habitat has been destroyed. The same era, however, set up a number of nature reserves – *zapovedniks* – for science and wildlife, and it's one of these that may hold the key to the animal's future.

Lazovsky Reserve is about 350km away from the base of the wild population of Amur leopards, and used to be part of their range until earlier this century. This is where the reintroduction comes in. Linda Kerley takes up the story.

'Our long-term plan is to reintroduce leopards to Lazovsky, in effect creating a second wild population,' says the wildlife biologist, who is working for ZSL on the project. 'There are leopards in captivity that we're breeding as part of the potential reintroduction programme, but first of all

JONATHAN BUCKMASTER



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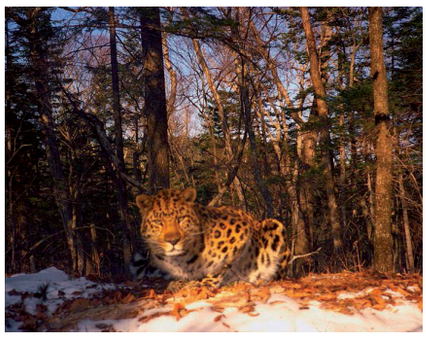
we have to make sure the conditions for them are absolutely right. One component of the planning work is wildlife diseases, and this is a three-point plan.'

What are those three points? 'First of all,' says Linda, 'we have to discover whether there are any diseases in the area of and around the reserve that might affect the leopards. Then we need to check the leopards that do exist in the wild to determine their health patterns. Finally, we will compare those results with our tests on the captive leopards.'

Sounds simple? Not a bit of it. Checking for disease is hard work and requires a large body of data. For a start, leopards have fairly catholic tastes when it comes to prey. Deer, boar, badgers and weasels can all be on the menu, so these animals have to be tested. If, say, badgers around the reserve carry TB, then the fear is this disease could be passed on to the leopards with every meal.

It's not just the wild animals that need testing, either. 'Many of the villages around Lazovsky are populated with domestic dogs and cats,' says Misha Goncharuk. 'Animals like these don't recognise things like reserve boundaries, and although they're unlikely to end up as leopard prey, there's still the possibility that any disease they carry could be passed through the chain.'

Twenty-four-year-old Misha has plenty of experience with domestic animals, as he's a vet.



Linda and Misha (top) check the health of animals after blood sampling

Wild animals are a different proposition, however, so in the summer ZSL and Moscow Zoo hosted a workshop at the Moscow Zoo and Breeding Station to train local vets in anaesthetising and sampling leopards and other wild animals.

'We don't usually get the opportunity to take samples and test in this way,' says Misha, 'so it was a great opportunity to broaden our skills. As a vet, I often find that pet-owners have ideas about how I should treat their animals. One of the great things about working with wild animals is that they don't have interfering owners. I enjoyed being able to discover more about veterinary science, without the side-effect of human confrontation.'

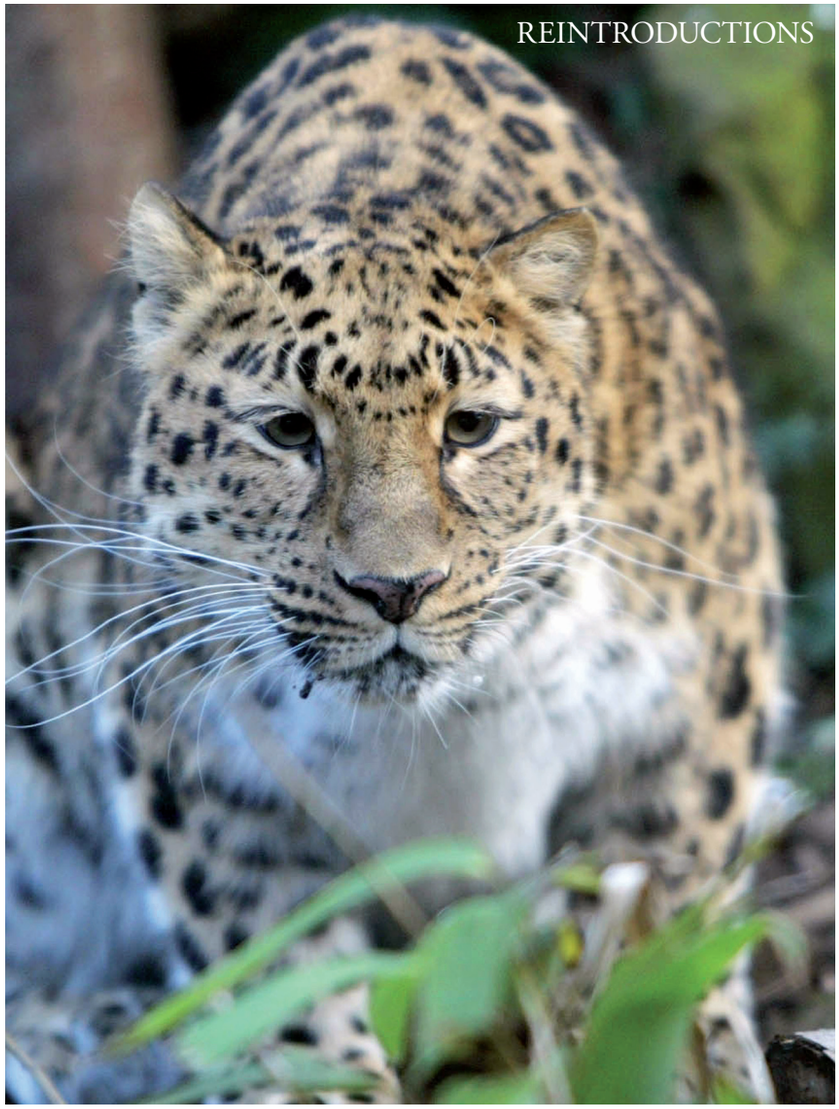
The skills that Misha and his colleagues have been learning will be put to good practice. Blood sampling of prey animals around the reserve

started last spring, and over the winter they'll be testing other species, such as deer, which are easier to trap during snowy conditions. These are the months when deer are at their hungriest, and hay laced with salt makes a fine lure into a trap. A quick dart, a quick blood sample, and the animal is back on its feet again and away.

Trapping is and has to be a very careful process. Traps such as foot snares, which are used for wild leopards, are fitted with electronic signals which go off as soon as they're activated, ensuring that the vets are able to reach the animals as soon as possible after capture.

'The Lazovsky reserve is about 121,000 hectares in size,' says Linda, 'so we've plenty of land to cover. Which is why it's great that so many of our Russian vets are so enthusiastic to find out how to sample wildlife. Disease analysis is such an important part of modern biology, and it's exciting to see the new generation thoroughly embracing it.

'It's thanks to ZSL and Darwin Initiative funding that we've been able to come so far, but there's another facility we'd still like to build into the programme. We've already helped the Primorski State Agricultural Academy renovate and outfit their diagnostic laboratory so that they can test samples for this project and others in the future, and there is another room in that building that we'd love to convert into a necroscopy room, so that we can conduct full post-mortems on dead animals. It's always a catastrophe when a wild leopard dies, or an Amur tiger too, but it would be wonderful to have the opportunity at least to analyse why it happened, and discover even more about the animals' physiological make-up. Post-



mortems on other wildlife could also contribute substantially to the disease surveying work. If we can get further funding, we could achieve this.'

Once the disease sampling is complete, and assuming that the comparisons with the conditions faced by the wild leopards are favourable, that part of the reintroduction preparation will be done. Work is also proceeding in other essential arenas, such as getting full support from the Russian government and – not least – raising the necessary money. Even just in terms of the details of getting leopards out there, many stages will remain to be tackled: the leopards bred for reintroduction will first of all be put into a protective enclosure in the reserve; their cubs will then have to learn what life is like in the wild, finding out through aversion therapy what they should avoid, and given the opportunities to hunt for themselves. Then, and only then, will wild Amur leopards have a chance to reclaim part of the wild forests of Russia that were once their own.

It's a lengthy process, but bearing in mind mankind's destruction of the leopard over so many years, one well worth seeing through. ZSL

For more on the Amur leopard programme, visit Misha's blog at zslblogs.org