



# SONGBIRD ON THE BRINK

HOW THE THREATENED ASIAN SONGBIRD ALLIANCE HAS BROUGHT THE JAVAN GREEN MAGPIE BACK FROM THE BRINK OF EXTINCTION

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The warm, humid afternoon air was thick and oppressive. It was filled with sounds: the annoying buzz of a mosquito too close to my ear, the mechanical whirrs and screams of cicadas starting their evening serenade, a Javan gibbon's call echoing through the distant forest – but no birdsong could be heard.

It was 2014 and I was with a team of Indonesian biologists, searching some of Java's most remote forests for the Javan green magpie (*Cissa thalassina*), one of Southeast Asia's most threatened and elusive species. So far, our searches had been in vain. Rumours of birds surviving in these ancient forests were nothing more than that; and worse still, we heard stories of bird trappers getting there months or years before us to catch the last remaining birds.

Suddenly the unmistakable loud ringing call of a Javan green magpie 'Ekek geling!' was heard in deep vegetation, no more than 100 metres from us, quickly answered by a second bird. Then silence. We could barely control our emotions and our hearts raced as we desperately scanned the forest for any sign of movement or a glimpse of a bright green bird behind the green wall of vegetation. We waited until nightfall and returned to the forest at dawn the next day, but to no avail; this mysterious bird had eluded us again.

We left the forest with mixed feelings – disappointed to have not actually seen the bird, but elated by the knowledge that it still existed. Prior to our encounter, it had been almost 10 years since it had last been seen in the wild by an ornithologist.

The Javan green magpie really is a species teetering on the brink of extinction. It was given full species status in 2012, when *Cissa thalassina* was recognised for its taxonomic uniqueness, separated from other green magpies by its distinctive morphology and vocalisations.

Soon after this revision, it became clear that the species was rapidly disappearing, and that without urgent action it would be lost for ever.

Through the direction of TASA, EAZA's very own Threatened Asian Songbird Alliance, a plan was hatched – to find and rescue any Javan green magpies from the trade, or those that might be held by private bird keepers and establish an assurance population.

Cikananga Wildlife Centre, with its threatened-bird conservation-breeding aviaries, was the obvious choice to

pioneer this project, as a number of EAZA zoos were already actively supporting their work and were able to help guide the project.

### FIRST STEPS

After months of searching, a few individuals were found in remote villages in the hands of private keepers or on dirty market stalls. These birds were often long-term captives with no provenance of when or where they were trapped. Their faded dull-blue plumage was the only indication of the time they had spent in captivity.

Maggies of the genus *Cissa* are unique in that they require a certain yellow pigment (lutein) obtained from their mainly invertebrate diet to maintain their vibrant colouration of bright apple-green plumage and coral-red bill and feet. Without this, they fade to washed-out, pale blue versions of their former selves.

Within a few months of arriving at the breeding centre and receiving the correct natural diet, the birds started to regain their beautiful colours and were showing signs of breeding.

The first chick was hatched and successfully reared in 2013, and in the years that followed, more founder birds were rescued, husbandry skills were perfected by local staff trained and mentored by EAZA zoo avian managers and volunteers, and breeding has increased.

With the population steadily growing, the next step was to establish a network of satellite populations in the region with good zoological institutions working together to build a strong 'safety-net' population.

However, in 2014, disaster struck, when during a series of night-time raids on the Cikananga centre, a total of 142 Critically Endangered birds were stolen. Only one Javan green magpie was taken, but the thefts, thought to have been carried out by gangs linked to the illicit illegal bird trade, decimated the breeding programme for the equally rare Black-winged myna (*Acridotheres melanopterus*).

These shocking events only increased our urgent need to move birds and reduce the risk, so in 2014, the Taman Safari Indonesia (TSI) zoo near the city of Bogor, received five birds from Cikananga. TSI is a

large zoological institution with four separate zoos spread over Java and Bali, already actively supporting the conservation of a number of other threatened Indonesian species.

Additionally, it was now felt that to avoid the potential risk of further catastrophe (through theft or disease outbreak), we should move some of the birds out of the region. With the help of Taman Safari, who quarantined birds from Cikananga and helped with the complex transport arrangements, six pairs of Javan green magpies finally arrived in Chester Zoo in October 2015 after a nail-biting 38 hours in transit, which involved delays, last-minute negotiations with government agencies and missed connecting flights.

After quarantine at Chester, four pairs were moved to their new facilities at the zoo and pairs were sent to Jersey Zoo and Prague Zoo, both EAZA institutions with excellent songbird breeding experience.

An EEP was started in 2016, which was the first of its kind working with such a threatened bird both in Europe and in its range country.

### STEADY PROGRESS

Two years on and the albeit still small *ex situ* population is looking remarkably healthy, thanks to successful breeding taking place at Chester, Prague and Jersey. Both of the latter received second pairs of birds in 2018, as did two new EAZA songbird specialist institutions, Waddesdon Manor and Newquay Zoo, each of which received pairs in 2018. Taman Safari Prigen, TSI's park in East Java, took five pairs of Javan green magpies from TSI Bogor in early 2018 and have recently fledged their first chick.

With a 100 per cent known pedigree and an overall gene diversity of 94 per cent in the living population and an annual growth rate of 17 per cent (based on the past three years), this project makes other studbook keepers rather envious! We are learning a great deal about the biology, dietary and breeding requirements for this wonderful species and the first EAZA Best Practice Guidelines are currently in preparation.

The Javan green magpie EEP is the first such programme for a bird species to be officially approved under the new EEP structure.

This magpie is, of course, the flagship species for EAZA's Silent Forest campaign and one of the campaign's projects is ornithological surveys of west and central Java's most important mountain forests. This vital work has already started and is being carried out by local BirdLife partner Burung Indonesia, Manchester Metropolitan University and other local stakeholders. The data gathered will help to inform decision-makers and provide scientific evidence for the need for further forest protection as well as feed into a recovery plan for the species.

The conservation of the Javan green magpie is a perfect example of what we now call the One Plan approach.

Real progress has been made in a very short period of time. Birds have been recovered from the trade and a conservation-breeding programme has been initiated across two geographic regions. Husbandry methods are being perfected and shared between participating organisations. Education initiatives have begun with Chester Zoo's Discovery & Learning team, working with local communities around Cikananga, and Taman Safari's KASI foundation is doing the same around its zoological parks.

Of course there is no room for complacency, as the known global population is still tiny; with only 68 birds kept in eight institutions across two regions, the future of the species still hangs in the balance. Birds still occasionally turn up in bird markets, but numbers in the wild are believed to be extremely low.

The Indonesian government has recently added the Javan green magpie and other threatened songbirds to its protected list, and it is hoped that stronger law enforcement will help protect this species for future generations.

The next steps are for conservation practitioners from multiple disciplines (avian managers, field biologists, reintroduction specialists, veterinarians, educators, government authorities and NGOs) to work together to develop a conservation action plan for the species.

It is hoped that in the future, Java's verdant mountain forests will once again echo with the calls of this wonderful and mysterious bird.