



Oriental
BIRD CLUB

Grant reference number:

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Final report

Organisation name: Cikananga Conservation Breeding Centre

ASAP species: Javan Green Magpie *Cissa thalassina*, Rufous-fronted Laughingthrush *Garrulax rufifrons* (nominated and subspecies), Black-winged Myna *Acridotheres melanopterus*.

Project title: Continuing Breeding Programs at Cikananga Conservation Breeding Centre

Period of project implementation: 09/2020 – 08/2021

1. Brief Executive Summary (max. 300 words)

Due to the effects of the CoVID-19 global pandemic, Cikananga Conservation Breeding Centre (CCBC) found itself in a situation of financial instability. With reduced funding and global uncertainty, CCBC was facing the prospect of reducing all activities to only those deemed essential, this included the halting of conservation breeding programs for the local populations of Critically Endangered ASAP species.

With the financial assistance of the ASAP Rapid Action Fund and the Oriental Bird Club, CCBC was able to continue vital conservation breeding efforts. The funding enabled two keepers to receive full wage over this period and for a diverse diet to be supplied to the ASAP species within CCBC. A nutritious diet is a key component for the encouragement of breeding, for the Javan Green Magpie *Cissa thalassina*, this involves a heavily carnivorous diet e.g. frogs, lizards and eels. For the Rufous-fronted Laughingthrush *Garrulax rufifrons rufifrons* and ssp. *slamatensis* and Black-winged Myna *Acridotheres melanopterus* a consistent supply of live feed e.g. insects is required to maintain good body condition and encourage breeding.

Through an approach which targeted underrepresented genetics, CCBC was successful in breeding the Javan Green Magpie and the Rufous-fronted Laughingthrush. Of the successful breeding efforts of these two species, all pairings had founder individuals which were not yet represented, this in turn provided important diversity to the genetics of the local population.

Aside from successful breeding efforts, CCBC made multiple new breeding pairs with most exhibiting promising breeding behaviour e.g. nest building which is promising for future breeding seasons. The breeding of the Black-winged Myna was not encouraged during this period due to aviary capacity limitations.

This funding period was not without its challenges, including facilities that required maintenance, species that continue to prove difficult to consistently breed and the lingering effect of the CoVID-19 pandemic. Moving forward, the financial threats which this funding helped to alleviate are still present and it is currently a priority for CCBC to find further funding.

2. Objectives. Please list your project's objectives and report progress against each.

Continue momentum of conservation breeding programs – Funding enabled us to continue breeding efforts with selected pairs of Javan Green Magpie and Rufous-fronted Laughingthrush, programs which would otherwise have halted due to financial instability. This objective includes ensuring two of our staff members had their salary covered for this period ensuring CCBC was at full capacity in terms of workforce, imperative when providing daily care for our large population of birds.

Providing a complete and varied diet – The funding provided ensured we were able to continue feeding a complete diet which is vital for the encouragement of breeding in the ASAP species covered by this project. Javan Green Magpie especially require a diverse carnivorous diet for optimal breeding condition and all species require high quality feed when rearing chicks. It was decided due to aviary capacity issues that we would not attempt to breed the Black-winged Myna this year, however funding was still used to provide a complete diet for this species that maintained our population in good condition. The breeding requirements of the Black-winged Myna are comprehensively understood by CCBC and the centre has had much success since the inception of the conservation breeding programme. It is our plan to continue the conservation breeding programme of this species in the drier months of 2022.

3. Outcomes and impacts.

- a. Please describe how your project contributed to the conservation outcome(s) you included in your application.

The outcome of this funding ensured that stability was brought to CCBC at a time where funding has been significantly impacted. This funding meant the breeding programmes at CCBC could continue, albeit at a reduced intensity, this is in particular reference to our local populations of Javan Green Magpie and Rufous-fronted Laughingthrush. CCBC focused

therefore on underrepresented genetics of these two species over the breeding season and maintained the health of the populations as a whole. With our high welfare standards maintained for all three ASAP species and breeding successes with the Javan Green Magpie and Rufous-fronted Laughingthrush, we have successfully contributed to the *ex situ* populations by increasing diversity and also furthering knowledge.

Another important factor for maintaining our local populations of critically endangered species was that this funding enabled us to continue hiring full time a full complement of local staff. This funding provided the salary of two keepers who provide daily care to all the birds within the centre.

- b. How were your project's results or successes measured? Please refer back to section B7 in application.

Breeding Pairs

CCBC underwent multiple introductions of birds to create new breeding pairs and in doing so went into the breeding season with genetically valuable Javan Green Magpies paired and with breeding encouraged. Due to the difficulty of breeding the Rufous-fronted Laughingthrush we attempted to make as many breeding pairs as possible and encourage breeding with all pairs. Particularly exciting was that all of our *Garrulax rufifrons slamatensis* were established in breeding pairs prior to the breeding season, this numbered three breeding pairs and was the most that CCBC has ever had.

Breeding Behaviour

Of the four Javan Green Magpie pairings which were encouraged to breed, two built nests and proceeded to lay eggs and incubate. From these two pairs three chicks were produced. Both females of these breeding pairs are founding individuals which had never bred before and provide valuable genetic diversity to our local population. For the pairs which did not attempt breeding we have multiple hypothesis but it is likely the pairings were too new and/or the pair did not feel comfortable in their environment.

The Rufous-fronted Laughingthrush is a challenging species for conservation breeding and although the breeding programme has had success since its inception, it is still not consistent. The slow progression of this breeding programme is likely due to many of our individuals still being founders and consequently very sensitive to the surrounding environment. This breeding season we saw positive breeding behaviour from pairs of both the nominate *G. r. rufifrons* and sub species *G. r. slamatensis*. Almost all pairs built nests but many were not comfortable to attempt breeding. Of the ones that laid eggs, we saw multiple cases of destroying eggs only a

few days into the incubation, this we hypothesize is a stress response to not feeling comfortable in their environment and with the next breeding season approaching we will take steps to alleviate stress triggers in the environment e.g providing extra cover to the aviary. Of all the pairings, one pair bred a single chick to independence, within this pair the male had never bred before in CCBC and the female had bred once before in 2014.

Overall the breeding of these two species was a challenge during this funding period as we targeted encouragement of breeding with individuals who have never bred before. Despite what is a much reduced output of offspring compared to previous years, the formation of breeding pairs and breeding behaviours observed are positives to take into the next breeding season.

Maintaining High Health Standards

All three ASAP species were provided a complete diet to maximise body condition and health. This was particularly important for the Javan Green Magpie and Rufous-fronted Laughingthrush due to the encouragement of breeding. Despite not encouraging breeding in the Black-winged Myna, the diet provided is still of utmost importance as CCBC has experience with this species being very sensitive to environmental conditions, with individuals easily succumbing to significantly reduced body condition. With funding enabling a consistent supply of insects, CCBC was able to gut load the provided live feed for high nutritional content. Funding also ensured the local population received fresh fruit daily.

4. Please describe any barriers or challenges you had when implementing this project, and if you were able to overcome these, what you did.

All projects experience barriers and challenges during implementation. Sharing these, and how you managed them, can be extremely helpful for others facing similar situations and can allow future conservation interventions for the species in question to be more effective and efficient. Therefore, please be open and transparent and provide as much detail as you can.

Facilities

The facilities at CCBC are a mixture of new aviaries (built in the past 5 years) made from steel and cement and old aviaries (over 15 years old) made from wood and fine mesh. Whilst we aim to encourage breeding in the newer aviaries which are safe from rats and provide greater protection from adverse weather, the poor conditions of the old aviaries means we often must house birds in a way which may not benefit breeding attempts. Fortunately we have received funding in the past couple of years which has been used to construct a new aviary block over the course of the dry season this year which we hope benefits us greatly in our *ex situ*

environment as we are able to house birds more spaced out through the centre and also move birds from aviaries which pose a welfare risk.

Funding

Despite the funding assistance from ASAP and OBC, this period, despite attempts to gain new funding, saw our financial situation remain unstable due to the effects of CoVID on most organisations. This instability has reduced the rate of progress of multiple aspects of the centre which for now have to be deemed as non-essential.

Troublesome species

As is found by all institutions which hold and attempt to breed the Rufous-fronted Laughingthrush, results remain inconsistent at CCBC and this species presents a considerable challenge for conservation efforts. The Rufous-fronted Laughingthrush provides a great example as to why, as conservationists, we cannot rely on conservation breeding too heavily for certain species and we must be prepared for a number of years to pass as we learn about species specific requirements for some species.

5. Were any components of your project not achieved or not completed? If so, how has this affected the overall impact of the project?

All components of the project were achieved to varying degrees of success. The successful breeding efforts although positive for our conservation efforts were lower than the target that we had aimed for. This has not significantly affected the overall impact of the project as we continue working with these species and build on the knowledge and experience gained through this period.

6. What are your next steps or future plans for the ASAP species this project targeted? *For example, include details if the project will be continuing, long-term needs (funding, resources etc.), and whether the right threats were addressed or additional ones have been identified.*

As is the strategy of CCBC to focus on a small number of species that are in urgent need of conservation efforts we have no plans to stop working with these species. Instead we are

committed to spending our time and resources for years to come to the benefit of these species both in the *ex situ* environment as well as the *in situ* environment. As our *ex situ* facilities improve and grow as does the size and genetic diversity of our local populations.

This in turn consequently means our long-term needs in regards to funding increase. The funding we received through this period was pivotal in ensuring CCBC could continue its vital conservation work and the threats were addressed appropriately. These threats however are unfortunately still present at the end of this funding period as we are still experiencing instability due to a much reduced funding commitment as some sponsors are unable to continue due to the effects of the CoVID-19 pandemic. For the coming period we are still looking for sponsors to cover costs that this funding importantly covered.

For the Javan Green Magpie, CCBC this year has commenced a program with Chester Zoo and Manchester Metropolitan University with funding obtained through the EAZA Silent Forest Campaign. This programme is taking a mixed method approach to research the current status of threats, behavioural ecology and conservation status of the Javan Green Magpie. The long-term goal of this project is to identify a site that local communities can be involved with to assist with *in situ* conservation efforts.

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7. Based on the results of your project, what are your recommendations for conserving your project's focal ASAP species? These may be general or specific, reflecting the insight you gained since submitting your proposal to ASAP: anything which might help others working to conserve the species, or yourself in future, be more effective.

For the ASAP species focused on in this project it is of utmost importance other conservation breeding institutions hold these species. This has many benefits which include, but is not limited to, the growing of known captive population numbers, reducing the risk that is present when too many individuals are held at one site and knowledge/experience sharing. With a network of holders formed, a wider management of individuals can be undertaken through the formulation of a studbook, enabling transfer of individuals between institutions further diversifying the genetics.

As previously mentioned, the over reliance on conservation breeding is dangerous for more sensitive species such as the Rufous-fronted Laughingthrush. This further compounds the need for a holistic approach to conservation with adequate resources and efforts dedicated to tackling root causes.