

# Survival Blueprint

## Cebu Flowerpecker, *Dicaeum quadricolor*



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Contributors:

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## 1. STATUS REVIEW

**1.1 Taxonomy:** *Dicaeum quadricolor* (Tweeddale, 1877). The Cebu Flowerpecker is a passerine bird of the flowerpecker genus *Dicaeidae*.

### 1.2 Distribution and population status:

#### 1.2.1 Global distribution:

Country	Population estimate (plus references)	Distribution	Population trend (plus references)	Notes
Philippines	85 – 102 individuals (Reintar et. al. 2019, Paguntalan L.J. 2005)	Cebu Island	Stable (Reintar et. al. 2019, Paguntalan L.J. 2005)	Species search, monitoring and distribution since 2003. Forest area and quality comparison from 2005 to 2019.

#### 1.2.2 Local distribution:

Country	Region / province	Site	Level of Protection	Population size	Reference(s)	Notes
Philippines	Cebu Province	Alcoy Forest	Forest is actively and effectively protected through a community-based forest protection programme	60-70	Reintar et. al. 2019 Paguntalan L.J. 2005	Through effective forest protection, the forest in Nug-as has increased and quality improved. Most likely the population in the area is maintained or might have slightly increased. There were more records of the Cebu Flowerpecker in the early 2000's, but this can be attributed to more projects active and people doing ground work that time particularly by the Cebu Biodiversity Conservation Foundation. I believe this from my overall visit and assessment of the forest and interviews with the local forest wardens where all of the historical sites where the CFP was recorded improved in forest quality.



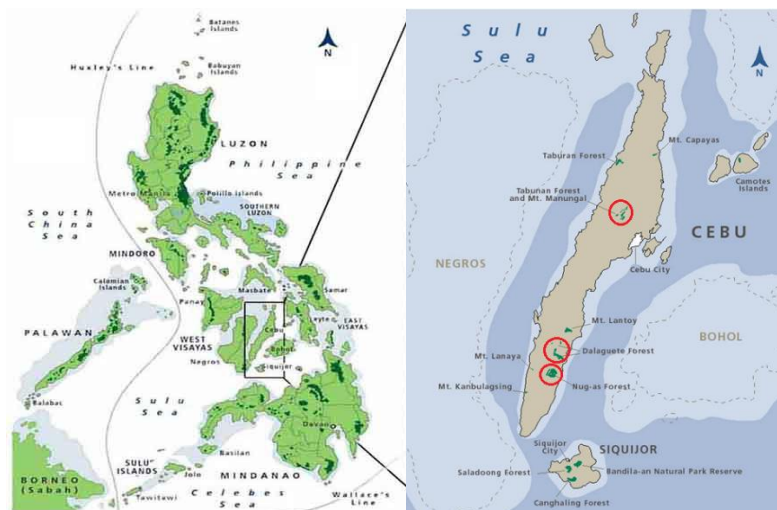
Philippines	Cebu Province	Dalaguete Forest	Forest is protected by local forest wardens but there is insufficient personnel for patrolling and monitoring. The area is within the Palinpinon range that is part of a Local Conservation Area (LCA).	10-12	Reintar et. al. 2019 Paguntalan L.J. 2005	Forest area in Babayungan, Dalaguete where the Cebu Flowerpecker is known to exist has decreased. This might have negatively impacted the population of the Cebu Flowerpecker in Dalaguete.
Philippines	Cebu Province	Tabunan Forest in Central Cebu Protected Landscape (CCPL)	Tabunan is within the Central Cebu Protected Landscape under the National Integrated Protected Areas System (NIPAS). There is an existing Biodiversity Monitoring System that is regularly conducted by Protected Area Superintendent Office.	15-20	Reintar et. al. 2019 Paguntalan L.J. 2005	Since the early 2000's, the forest size in Tabunan has decreased because of agricultural expansion.



**1.3 Protection status:** The Cebu Flowerpecker is categorized as Critically Endangered by the IUCN and by the Philippine National Government through the Department Administrative Order 2004-15 pursuant to Republic Act No. 9147, otherwise known as the Wildlife Resources Conservation and Protection Act. The species was categorized as Extinct by IUCN in 1988 until it was rediscovered in Tabunan Forest in 1992. Since then, the species is identified as one of the priority species for conservation through the Philippines Biodiversity Strategy and Action Plan of which one of the objectives is to develop the Cebu Flowerpecker Strategy and Action Plan which is already been developed. I helped developed the activity design and provided the recent data for this.

#### 1.4 Ecology, behaviour and habitat requirements:

**Habitat:** The Cebu Flowerpecker inhabits the little remaining natural forest over limestone in Tabunan Forest in Central Cebu Protected Landscape, Babayungan forest in Dalaguete and Nug-as forest in Alcoy (the largest forest in Cebu and of the species) where it is found in forest interior and edges specifically on areas with flowering and/or fruiting endemic plants specially of the *Loranthaceae* mistletoe family. The estimated remaining forest habitat of the Cebu Flowerpecker is around ~1,000 hectares or 10km<sup>2</sup>.



Map of Philippines and Cebu. The red circles show the locations where the Cebu Flowerpecker is found.

**Ecology and Behaviour:** Unlike most of the diurnal birds, the Cebu Flowerpecker is active at the later part of the morning time between 09:00 to 13:00 where bird activity was low for evasive purposes as the species is known to be bullied by the other birds by aggressive competition specially the Red-striped Flowerpecker *D. australe* (Dickinson *et al.*, 1991). On foraging, the species quickly visits the flowering/fruited tree and doesn't stay long. The species rarely calls making it even harder to detect the bird. The call is similar to the common Pygmy Flowerpecker *D. pygmaeum* but weaker in sound, slower in pace and lesser in pitch.

**Diet:** The Cebu Flowerpecker is observed to have a diet preference on mistletoe plants specifically of the *Loranthus sp.* (Paguntalan *in litt.*, 2005), *Lepeostegeres cebuensis* (Reintar *in litt.*, 2017). It was also observed to feed on small *Ficus* fruits (Paguntalan *in litt.*, 2005) and an endemic *Callophyllum* (Jakosalem *in litt.*, 2012) species. In the last two years, the species



was observed in Nug-as forest to frequently feed on the endemic Cebu Mistletoe *Lepeostegeres cebuensis* which is the most common and abundant of the mistletoe species in the area. The mistletoes are an important food item for the Cebu Flowerpecker and with the other fruit and flower feeding forest birds in Cebu as they bear flower and fruits every month specially the Cebu Mistletoe.

### 1.5 Threat analysis:

Threat	Description of how this threat impacts the species	Intensity of threat (low, medium, high, critical or unknown)
Illegal tree cutting for agricultural expansion and firewood gathering (most significant for Tabunan forest in CCPL)	This threat impacts the species by further reducing its habitat which is already in little in Tabunan. These illegal cutting were done by locals particularly on those whose farms are near or adjacent to the forest. Regular forest patrolling through Biodiversity Monitoring System and LAWIN is conducted by personnel of the Protected Area Superintendent of CCPL.	Critical
Road expansion in Nug-as Forest in Alcoy	This threat impacts the species by reducing its habitat. This is particular in Nug-as forest in Alcoy where the local road will be expanded to become a provincial road to improve the transport of goods particularly vegetables from Nug-as. Certain adjacent parts of the road to be expanded are mature secondary forest where the Cebu Flowerpecker and other endemic species utilize therefore reducing their habitat and escalating competition for resources between the Cebu Flowerpecker, other flowerpeckers and sunbirds. The road which to be expanded is already exists and the plan does not incorporate creating new roads so fragmenting the forest in Nug-as is not an issue only the reduced habitat for the species	Critical
Hunting	Since the middle to late of the 2000's, hunting was not an issue for these three sites particularly for the Cebu Flowerpecker. There were few scattered reports about hunting but for the doves and they were dealt with by confiscating the homemade air guns and penalizing them	Low



## 1.6 Stakeholder analysis:

Country	Stakeholder	Stakeholder's interest in the species' conservation	Current activities	Impact (positive, negative or both)	Intensity of impact (low, medium, high or critical)
Philippines	Department of Environment and Natural Resources	It is a part of their mandate to implement conservation of the species and its habitat as they are also classified as forest lands and or protected areas. The species is identified a priority species for conservation by the Philippine government	Development of the Cebu Biodiversity Strategy and Action Plan and the Cebu Flowerpecker Strategy and Action Plan	Positive	Critical
Philippines	Protected Area Management Board (PAMB) of Central Cebu Protected Landscape (CCPL)	The PAMB is a multisectoral body composed of local stakeholders. The PAMB leads the management of the protected area.	Biodiversity Monitoring System, Enforcement, Habitat rehabilitation	Positive	Critical
Philippines	Provincial Environment and Natural Resources Office of the Cebu Provincial Government	It is their mandate to implement conservation of the species and its habitat.	Development of the Cebu Provincial Biodiversity Strategy and Action Plan and the Cebu Flowerpecker Strategy and Action Plan. Capacity building on forest local forest wardens. Tree planting. Conservation awareness and advocacy to the local communities, academe, general public and local government units.	Positive	Critical
Philippines	Provincial Tourism Office of the Cebu Provincial Government	Part of their program is the development of local birdwatching ecotourism sites in Cebu of which Nug-as Forest in Alcoy is one of their site.	Capacity building training (species and habitat monitoring) on local forest wardens. Conservation awareness and advocacy mostly to the local government	Positive if the program and system is implemented well, otherwise it will be negative	Critical



			units and general public.		
Philippines	Local Government Unit (LGU) of Alcoy and Barangay LGU of Nug-as.	Nug-as forest is within their political jurisdiction.	Providing support to the local forest wardens who conduct the forest patrolling and species monitoring.	Positive	Critical
Philippines	Local Government Unit of Dalaguete and Barangay LGU of Babayungan.	Babayungan forest is within their political jurisdiction.	Providing support to the local forest wardens who conduct the forest patrolling and species monitoring. Tree planting.	Positive	Critical
Philippines	Philippines Biodiversity Conservation Foundation, Inc.	Cebu Island is part of their priority site and is implementing the Cebu Biodiversity Conservation Sub-programme and the Cebu Flowerpecker a priority species for conservation. They are also the technical partner/advisor of the Provincial Environment and Natural Resources Office of the Cebu Provincial Government	Providing support to the local forest wardens who conduct the forest patrolling and species monitoring. Capacity building: providing training (biodiversity monitoring system and species identification) to local forest wardens, academe and local government offices. Providing technical support/advice to the Department of Environment and Natural Resources of Cebu Provincial and Regional Office. Conservation awareness and advocacy activities. Developing the Cebu Biodiversity Strategy and Action Plan and the Cebu Flowerpecker Strategy and Action Plan.	Positive	Critical
Philippines	KMYLBNA	They are the local People's Organization within Brgy. Nug-as where Nug-as forest is found and they are the recipients of the Community-Based Forest Management Agreement (a land	Forest protection through forest and species monitoring. Tree planting. Conservation awareness and advocacy. Research on the Cebu Flowerpecker.	Positive	Critical



		tenorial instrument between the Department of Environment and Natural Resources) in Nug-as forest which gives them the right of tenure, management and protection.			
Philippines	Cebu Technological University – Argao Campus	They are one of the active academic institutions that conduct several researches (particularly in plants and bats) in sites where the Cebu Flowerpecker exists including one specific plant that the Cebu Flowerpecker feeds on.	Flora research in Nug-as Forest in Alcoy, Flora and Fauna research in Dalaguete.	Positive	Critical





## 1.7 Context and background information that will affect the success of any conservation action for this species:

	Description	Threats	Opportunities
<b>Socio-cultural effects and cultural attitudes</b>	For those who knew the bird Cebu Flowerpecker, there is a sense of pride about the species particularly in areas where the species is found in Cebu.	Lack of knowledge about the existence and cultural importance of the Cebu Flowerpecker, may lead to cultural isolation of the species. Particularly that most of the people have not seen the species due to its rarity.	Opportunity to develop a cultural relevance and connection between the communities and the Cebu Flowerpecker.
<b>Economic implications</b>	There is an existing value in the species in the form of ecotourism particularly on birdwatching and photography.	Conflict between management of the potential funds raised from ecotourism. A possible conflict may arise on fund management if ecotourism will proceed without levelling off between communities and the local government.	<ul style="list-style-type: none"> <li>- Greater potential on increasing the value of community-based ecotourism in the sites where the Cebu flowerpecker exists.</li> <li>- Opportunity on acquiring grants and other forms of support for the conservation of the Cebu Flowerpecker and its habitat they will also benefit the communities.</li> </ul>
<b>Existing conservation measures</b>	Strong community-based forest protection in Alcoy and Dalaguete implemented by their local forest wardens. Establishment of Critical Habitat in Nug-as, Alcoy (in the process). Biodiversity Conservation Awareness campaign across the Province of Cebu. Habitat restoration initiatives.	Road widening project in Nug-as Forest in Alcoy town.	The conservation initiatives will lead to the protection and rehabilitation of these sites that in turn will develop into an ecotourism site that will provide an alternative livelihood to the locals.
<b>Administrative/political set-up</b>	Economic implication varies with political leadership terms. Specially that the Philippines has short political seat terms.	<ul style="list-style-type: none"> <li>- Change in political leadership (provincial, city, municipality and barangay)</li> <li>- Less priority among politician</li> <li>- Lack of awareness of political leaders</li> </ul>	<ul style="list-style-type: none"> <li>- Some political leaders are inclined in conservation. Particularly in the town of Dalaguete where the Mayor and most of the councillors are supportive with conservation initiatives. PBCFI and the town of Dalaguete has a Memorandum of Agreement to work towards</li> </ul>

			<p>biodiversity conservation in the town. This is also true with the previous Governor of the Province of Cebu where they mainstreamed biodiversity conservation in their provincial agenda. PBCFI also has a Memorandum of Agreement with the Province of Cebu to work for biodiversity conservation in the province.</p> <ul style="list-style-type: none"> <li>- Established provincial biodiversity council.</li> <li>- Crafted the CBSAP.</li> </ul>
<b>Local expertise and interest</b>	<p>There are local experts from the DENR, NGOs, POs and Academic institutions that are working together to learn and protect the species. For local experts, there is great interest in protecting the species and its habitat.</p>	<ul style="list-style-type: none"> <li>- Lack of second line of experts and advocates particularly from the People's Organization.</li> <li>- Lack of convergence and coordination between organizations and institutions.</li> </ul>	<p>Development of local expertise and increase in participation of conservation, academe and private organizations.</p>
<b>Resources</b>	<p>There is an existing pool of support (monetary and human resource) from various stakeholders most significantly from the Provincial government of Cebu, KMYLBNA people's organization, DENR, Local Government Unit of Dalaguete and Alcoy and PBCFI.</p>	<ul style="list-style-type: none"> <li>- Intermittent funding</li> </ul>	<p>Opportunity on converging and complementing the resources and initiatives to achieve a unified goal of conservation for the Cebu Flowerpecker.</p>

## 2. ACTION PROGRAMME

<b>Vision (30-50 years)</b>	
There is an increase in the population of Cebu Flowerpecker in an expanding natural forest, maintaining its conservation status.	
<b>Goal(s) (5-10 years)</b>	
To protect and maintain the breeding population of Cebu Flowerpecker and to promote the connectivity of habitats on the island of Cebu.	
<b>Objectives</b>	<b>Prioritisation</b> <i>(low, medium, high or critical)</i>
To protect and maintain the remaining habitat of the Cebu Flowerpecker and the birds	Critical
Conduct research on other potential sites where the Cebu Flowerpecker might still exist and gather more information about the species particularly its breeding biology	Critical
Increase the awareness about Cebu Flowerpecker to the people of Cebu most significantly in communities and local leaders where the species is found	Critical
Habitat restoration to increase forest cover suitable to the Cebu flowerpecker	Critical

Activities	Country / Region	Priority (low, medium, high or critical)	Associated Cost (USD)	Time scale	Responsible stakeholders	Indicators	Risks	Activity type
<b>Objective 1:</b> To protect and maintain the remaining habitat of the Cebu Flowerpecker.								
Creation, capacitation, and operationalization of enforcement officers and forest wardens within identified habitats of the Cebu Flowerpecker	Key Biodiversity Areas in Cebu	Critical	383,303	2019-2028	Department of Environment and Natural Resources (DENR), Local Government Units (LGUs), Academic institutions, Non-Government Organizations (NGOs), People's Organizations (POs)	Number of enforcement officers and forest wardens recruited and trained	Lack of resources to sustain the support for the forest wardens	Capacity Building, Education and Awareness, Land Protection, Livelihood, Economic and other Incentives
Assist Local Government Units in Alcoy, Dalaguete, Boljoon, Balamban and Cebu City in crafting their biodiversity strategy and action plan	Alcoy, Dalaguete, Boljoon, Balamban and Cebu City	High	14,374	2018-2022	DENR, Other Government agencies, LGUs, Academic institutions, NGOs, POs	Number of LGUs with local biodiversity strategy and action plan	Lack of financial resource and or support/interest to the activity	Law and Policy, Capacity Building

Activities	Country / Region	Priority (low, medium, high or critical)	Associated Cost (USD)	Time scale	Responsible stakeholders	Indicators	Risks	Activity type
<b>Objective 2:</b> Conduct research on other potential sites where the Cebu Flowerpecker might still exist and gather more information about the species particularly its breeding biology.								
Identify other potential forest areas that the Cebu Flowerpecker might be present	Cebu	Critical	38,330	2018-2022	DENR, LGUs, Academic institutions, NGOs, POs	Number of areas surveyed and records of the Cebu Flowerpecker		Improving Knowledge
Secure required permits (prior informed consent and gratuitous permit) for the research survey	Cebu Province	Critical		2018-2022	DENR, LGUs, Academic institutions, NGOs, POs	Issued permits	Difficulty in acquiring Prior Informed Consents to some LGUs	Improving Knowledge
Conduct of actual research survey	Identified sites in Cebu Province	High		2018-2022	DENR, LGUs, Academic institutions, NGOs, POs	Number of sites surveyed and reports	Bad weather conditions & phenomena (e.g. drought and typhoons)	Improving Knowledge

Activities	Country / Region	Priority (low, medium, high or critical)	Associated Cost (USD)	Time scale	Responsible stakeholders	Indicators	Risks	Activity type
<b>Objective 3:</b> Increase the awareness about Cebu Flowerpecker to the people of Cebu most significantly in communities and local leaders where the species is found.								
Conduct “Dalaw Turo” in public schools within the Brgy. where the Flowerpecker are found	Alcoy, Dalaguete, Boljoon and Cebu City	Critical	396,796	2019-2028	DENR, LGUs, Academic institutions, NGOs, POs	Number of schools, students and teachers conducted by “Dalaw Turo”	Difficulty in accessing some areas	Education and Awareness, Capacity Building
Conduct orientation in Brgy. assemblies and LGU’s sessions in towns of Alcoy, Dalaguete, Boljoon and Brgy. Tabunan Cebu City where Flowerpeckers are located.	Alcoy, Dalaguete, Boljoon and Cebu City	Critical			DENR, LGUs, Academic institutions, NGOs, POs	Number of Brgys. and LGUs oriented		Education and Awareness, Capacity Building
To advocate the Cebu flowerpecker as the flagship species of Brgy. Tabunan, Cebu City	Cebu City	Low			DENR, LGUs, Academic institutions, NGOs		Challenge in capturing the interest of the leaders and the passage in the council to legally declare the Cebu Flowerpecker as the flagship species of Brgy. Tabunan	Education and Awareness

Activities	Country / Region	Priority <i>(low, medium, high or critical)</i>	Associated Cost (USD)	Time scale	Responsible stakeholders	Indicators	Risks	Activity type
Conduct of biodiversity conservation related activities such as Wildlife Quiz Bowl and Wildlife Photo Exhibit and lectures	Cebu Province	High			DENR, Department of Education, LGUs, Academic institutions, NGOs	Number of biodiversity conservation related activities conducted, number of schools and organizations participated and number of individuals reached	Possible lack of support from key government partners due to change of political leadership	Education and Awareness
Multi-media IEC production on Cebu Flowerpecker (Prints/Radio/TV, etc.)	Cebu Province	High			DENR, LGUs, Academic institutions, NGOs, Media organizations	Number and types of IEC materials produced and disseminated	Insufficient resources	Education and Awareness

Activities	Country / Region	Priority (low, medium, high or critical)	Associated Cost (USD)	Time scale	Responsible stakeholders	Indicators	Risks	Activity type
<b>Objective 4:</b> Habitat restoration to increase forest cover suitable to the Cebu flowerpecker.								
Mapping of potential distribution area	Alcoy, Dalaguete, Boljoon, Balamban and Cebu City	High	709,111	2019-2021	DENR, NAMRIA, LGUs, Academic institutions, NGOs, POs	Number of sites mapped	Bad weather conditions & phenomena (e.g. drought and typhoons)	Species Management and Improving Knowledge
Site validation	Alcoy, Boljoon, Dalaguete, Balamban and Cebu City	High			DENR, NAMRIA, LGUs, NGOs, POs	Number of sites validated		Species Management and Improving Knowledge
Tree planting of native species and maintenance	Alcoy, Boljoon, Dalaguete, Balamban and Cebu City	Critical		2019-2028	DENR, LGUs, Academic institutions, NGOs, POs, Private organizations	Number of endemic trees and total area rehabilitated		Species Management



### 3. LITERATURE CITED

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