

# Birdbaths: Attracting birds to an urban home garden

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## Abstract

The present article describes how placing birdbaths, in an urban home garden, can provide a critical resource for the local avifauna. Between 2009 and 2014, two earthen-, and three cement birdbaths, of various sizes, were placed in an urban home garden. In addition, two sprinklers were set-up to drench the leaves of two bushes to encourage birds to bathe in the water-droplets collected on the leaves. A total of 47 species of birds comprising both residents, and migrants visited the birdbaths for drinking and bathing. The number of species visiting the birdbaths over the years, increased steadily from a mere eight species in the first year. Conservation implications of providing birdbaths in residential urban gardens, and the resulting opportunities for studying bird behavior, are discussed.

## Introduction

Water forms an important daily requirement of birds, and is essential for their survival, as they need to replenish what's lost through excretion, and evaporation through respiration, and skin (Welty 1982). Birds need to drink water frequently to compensate this loss. Birds also use water to bathe in, to clean their feathers, and to get rid of avian parasites (Anonymous 2004).

In the past few years, the demand for water has been growing exponentially, especially in urban areas. The unpredictable monsoons, the depleting ground water due to the uncontrolled sinking of bore-wells, and the urban planners' lack of clarity regarding the recharging of ground water, have only worsened the situation. Given this backdrop, it is becoming increasingly difficult for birds to satisfy their basic need for water in urban areas. The city of Bangalore is no exception to this.

Through this article I wish to report the effect of placing birdbaths in an urban home garden, and how, over time, it has attracted a large number of bird species. Since childhood I have always loved nature—trees, animals, birds— and as part of this experiment, I wished to observe birds, without disturbing them.

## Methodology

This study was carried out in my home garden, in the new housing colony inside the Indian Institute of Science (IISc) Campus in Bengaluru (Karnataka, India). Although the IISc campus is blessed with reasonably dense vegetation, and has a relatively diverse birdlife (Shyamal 1994) for an urban area, the bird population is very sparse in its residential areas. A reasonable variety of bird species is seen at a couple of select places on the campus, such as the Jubilee Garden, and the Water Pond areas.

For my project I selected a small area in my garden, of about six square meters, which is clearly visible from my kitchen window. Most of my observations of the activity around the birdbaths were made through the kitchen window, more particularly while I was cooking. A camera was kept within reach to photograph, and videograph the birds visiting the birdbaths.

A total of five birdbaths, comprising earthen- and cement pots of various sizes, were placed, and replenished with water (Table 1). In addition, mechanical sprinklers were used to spray the leaves of *Ixora ixora coccinea*, and *Hibiscus Hibiscus rosa-sinensis* bushes in the birdbath area, thus providing water droplets on the leaves for birds.

## Results

Initially, in September 2009, I placed a small, shallow pot (28 cm dia. x 10 cm depth) in the selected space. To prevent mosquitoes breeding in the pot, I changed the water once in three days. After a couple of weeks, dogs started visiting the spot to drink water from it. After another two weeks, a Large-billed Crow got the distinction of being the first bird visitor to frequent the birdbath. Then, over the next few days, the location started to become more interesting, with the appearance of a variety of birds, including Common Myna, Jungle Myna, Rock Pigeon, Spotted Dove, Oriental Magpie Robin, Asian Koel, and Red-whiskered Bulbul. By the end of the first year I had recorded eight different species of birds, and it was a joyous experience to see the birds playfully bathe in, and drink the water.

Then I decided to increase the number of birdbaths during 2010–2011. I kept two bigger, and deeper cement tanks (122 x 43 cm; 122 x 35 cm), and a smaller one (63 x 25 cm), next to the first pot (Table 1). To eradicate mosquito larvae, I released fishes (guppies, koi, and mollies) into the water, and also grew water plants such as lotus *Nelumbo nucifera*, star water lily *Nymphaea nouchali*, etc. I was happy that my little corner was increasing in natural diversity. Because of this, I did not have to change the water in these larger tanks. I also hung a small, and shallow pot (25 x 10 cm), from the branch of a nearby champaka *Magnolia champaka* tree. After a few days, I was surprised to see a White-throated Kingfisher parking in a tree nearby, possibly eyeing my fishes! One fine day I saw it diving into the pond and catching a molly! Occasionally, it would also dive into the water to take a dip and go back on the tree branch and shake its feathers vigorously (Bhat 2011). This kingfisher visited for about a year (2010–2011), and presumably stopped, once I stopped adding new mollies to the birdbath. I inferred that guppies were too small for the kingfisher. The koi were always deep inside the pond, and hence the birdbath, without food, was unattractive to the kingfisher! Another special visitor in the second year was a Black Kite. It was an amusing site to see this big bird perching on the edge of the pond, drinking water occasionally, and bathing by taking a gentle plunge into the pot, and then climbing onto the rim of the pot (Bhat 2013e).

From 2010–2011, through 2013–2014, I started noticing interesting behavioral patterns in different birds. Among various birds visiting the site, the Greater Coucal appeared to be shy. It

would survey the area for a long time, and then sit on one end of the pot. It would slowly jump into the pot, swim across, and come out on the other side. If it wished to take another dip, it would walk along the rim of the pot, to reach its original perch and dip into the water to come out on the other end to dry its feathers. It would run away, before any other birds visited the spot. The Asian Koel had an elaborate procedure for drinking water. It would first perch on different branches of trees near the pond, and would appear to do neck exercise, by tilting its neck in different directions, obviously surveying for lurking danger. Then it would sit on the rim of the birdbath and take five to ten minutes to drink a few sips of water. Spotted Doves, typically, came in pairs, and unlike the Asian Koel, they did not believe in wasting time. First, they ensured that nobody was around the birdbaths, then quickly flew to the pond, sipped, and flew away, into nearby bushes, to dry and clean their feathers. They rarely took a dip in the water. Rock Pigeons seemed to have a perception that they were under threat, and would fly in and out of the patch in no time, and sometimes it was difficult to tell whether they really drank any water at all. Red-whiskered Bulbuls appeared to really like water sports! They spent a lot of time plunging into the water, and splashing the water all around. The Oriental Magpie Robin liked to mark its territory around the birdbath, only during the nesting period. It would drive away other birds, and then drink, lifting its tail, and spreading it few times; a beautiful sight. The male sang all the time during its breeding season. Both, the male and the female really liked to drench their feathers fully in the birdbath. The Cinereous Tit avoided the birdbaths on the ground, but instead preferred to sit on the small pot hung on the champaka tree. This led me realise that some birds might prefer greater safety while drinking water and bathing; so I pushed the hanging pot closer to the bark of the champaka tree, and also camouflaged the area by tying a green creeper near the pot. After a few days, a pair of White-cheeked Barbets found this to be very safe and ventured to sit on the small pot. The two barbets would sit on opposite sides of the small pot and engage in synchronized drinking and bathing activity (Bhat 2013a). This was a splendid sight to watch. Sometime in February 2013, this branch fell down due to heavy wind and rain. I moved the hanging pot to an upper branch, but the barbets stopped their visits, may be because they did not feel secure with this new position.

While all these birds were visiting the birdbaths and the pots, I wondered about the absence of smaller birds such as sunbirds and tailorbirds. One afternoon, while watching my birdbath patch on a typically hot day, it suddenly rained for about ten minutes. After the rain stopped, I noticed a lot of water drops on the leaves of an ixora bush across the pond. I spotted a Common Tailorbird bathing by fluttering on the wet leaves, and then drying its feathers. Subsequently I started spraying water on the leaves of the ixora and hibiscus plants near the birdbaths, every morning and afternoon, hoping that would attract smaller birds. I was not disappointed. I was in for a treat with many small birds bathing on these leaves using the water drops. My bird list started growing slowly: Loten's Sunbird, Purple-rumped Sunbird, Oriental White-eye, and a flowerpecker. I had never seen the small birds at such proximity, giving me new opportunity to study them in detail. This also meant more work for me. Though the birdbaths required to be refilled once in a fortnight, water had to be sprayed on leaves twice a day, and sometime three to four times a day on hot days. These birds would typically be around from 0630 hrs to 0800 hrs, and 1500 hrs to 1600 hrs. I finally installed a mechanical sprinkler during 2012–2013 to extend the spraying of water

more efficiently. I could do this because the IISc administration set-up a Sewage Water Treatment Plant, and began supplying recycled water from it to the campus community for gardening.

During 2011–2012, and 2012–2013 I noticed a steady increase in the population of different species of warblers. About nine species of warblers became frequent visitors, and each one of them had an unique way of using the water. The Booted Warbler would wake me up at 0600 hrs with its call. As soon as I would complete watering the bushes, this warbler would stay in the lower branches of a Hibiscus plant and jump from one branch to the other, bathing in the shower of droplets that ensued. The Greenish Warbler was observed to hit the leaves from below, while flying, and get wet in the process. The Tickell's Leaf-, and the Western Crowned- Warbler preferred to get fully drenched by sitting in the path of a sprinkler. The Blyth's Reed-, Sykes's-, and Clamorous Reed- Warblers were the only warblers that liked to bathe in the pond, but in their own distinct way. I had put a small twig, with a few branches, in the middle of the pond, to help the small birds sit on it before jumping in the pond. These Warblers exploited this, and would sit on the twig, very close to the water surface. Then they would only dip their head in the water, and shake the neck vigorously to wet their body.

Among smaller birds, only the Oriental White-eyes ventured to bathe in the large birdbath, but were observed to do so, only once. This was a group of 10–15 birds. It appeared that this group had decided to take over the entire pond on that occasion, also getting drenched in the water on the leaves of Star water lily (Bhat 2013b). It remains a mystery to me what attracted them to the big pond. Otherwise they always preferred the branches of the Ixora. Typically, they always came in a group of 15 to 20 birds, and appeared to take over the Ixora plant to get wet. They also liked to get drenched by directly aligning to the jet of water, from the sprinkler, falling on the Hibiscus bush.

After I started using the sprinkler, I noticed that some of the birds, which came to the pond, preferred to go to wet bushes near the birdbath. Black-naped Monarch [34], and Asian Paradise Flycatcher [35], which started visiting the garden in the second and third years were seen to dive into the birdbaths. However, since 2012–2013, they were observed bathing, and drinking water, in the bushes. Recently, the bulbul has also preferred the bushes.

Another interesting observation was that some species of birds did not mind sharing the water, and tolerated the presence of other birds on the birdbaths and in the bushes. I've seen Jungle Mynas, Oriental White-eyes, sunbirds, and Oriental Magpie Robins share the birdbaths [36]. On the Ixora plant, a large variety of birds including sunbirds, white-eyes, flowerpeckers, tailorbirds, Red-whiskered Bulbuls, warblers, and flycatchers co-existed (Bhat 2013c, 2013d).



34. Black-naped Monarch.





35. Indian Paradise-flycatcher.



38. Forest Wagtail.



Photos: S. Bhat

36. Birdbath: Oriental Magpie Robin and Oriental White-eyes.

2013 has been eventful, with the appearance of rare birds in my garden. On 08 February 2013, at 0830 hrs, while I was observing the birdbaths from my kitchen window, I heard the call of a bird I did not recognise, and started tracking that voice under the bushes near the ponds. I spotted the bird, drinking water from the leaves and walking around, maybe hunting for food. I photographed it, and was later able to identify it as a Tickell's Thrush [37] (Grimmett *et al.* 2011; Bhat 2013g). This was only the second recorded sighting of the bird from Bengaluru city; the first being in Lalbagh (Prashant 2005). On 09 March 2013, I spotted a warbler, which looked quite different from other warblers that I had identified. I went through two field guides carefully (Ali 2009; Grimmett *et al.* 2011), and was able to confirm it as the Green Leaf Warbler, which was again a very rare bird in Bengaluru. I was also rewarded with a visit of the Forest Wagtail [38], which liked to get drenched by standing against a



37. Tickell's Thrush.

jet of water from the sprinkler. Then on 10 October 2013, I had the best reward of sighting Kashmir Flycatcher, the first record for Karnataka state (Bhat 2014).

A total of 47 species of birds were recorded visiting the garden, and using the birdbaths (Table 2). 36 of these used the birdbaths for both, drinking, and bathing, while the remaining eleven species only drank from them (Table 1).

Over the years, there was a steady increase in the number of bird species visiting the birdbaths in the garden. From a mere eight species recorded during the first year, the number increased to 47, during 2013-14 (Fig. 1). Of these, 46.8% were migrants, visiting the garden during winter, and early summer (Table 1). In addition, the birds visiting the birdbaths differed in their body-sizes, ranging from a size larger than a crow, to that smaller than

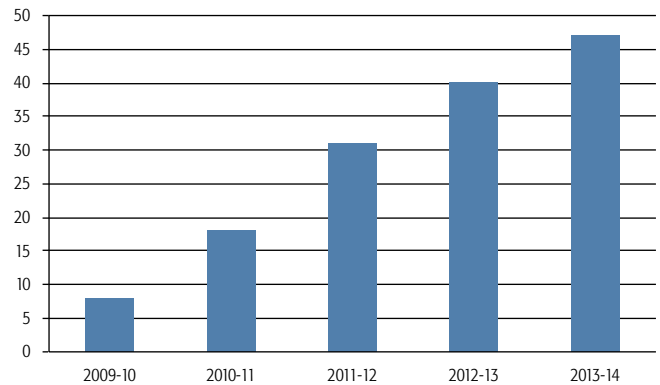


Fig. 1. Increase in the number of bird species visiting birdbaths.

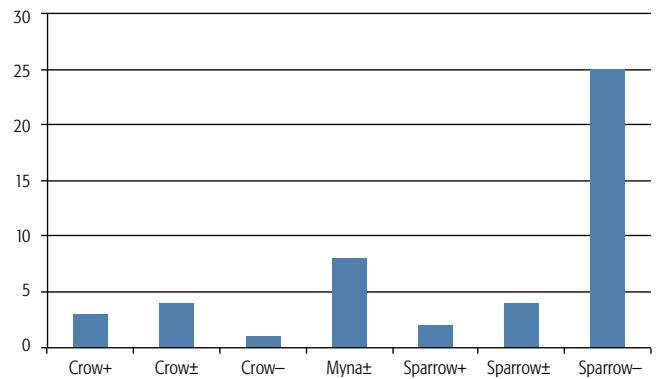


Fig. 2. Size distribution amongst birds visiting the birdbaths.

a sparrow. However, smaller-sized birds were the more frequent visitors (Fig. 2), with over 50% of the birds visiting the birdbaths being smaller than a sparrow; possibly indicating that the demand for water is greater among small birds rather than in larger ones (Bartholomew & Cade 1963).

In summary, these five years have been extremely rewarding, enabling me to watch and study the birds of my home garden. It is amazing how birdbaths can transform an urban garden into habitat that attracts birds, increasing their diversity from eight to 47 species (Table 1). This has enthused some of my friends to put out birdbaths in their gardens. I have also begun creating a bi-lingual blogspot, to share my thoughts on birdbaths (Bhat 2013f). I sincerely hope this would encourage a large number of people in the urban areas, to do their bit in reviving the avifauna in the urban areas.

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**Table 1.** Details of the birdbaths, their usage and the visiting bird species

Type of pot used	Dimensions (Cm)		Depth of water	Height of the rim from ground	No.	Usage	Bird species observed using the baths/plants*
	Diameter	Depth					
<b>Birdbaths</b>							
Earthen pot	28	10	5	10	1	Drinking and Bathing	1, 3, 12, 13, 14, 24, 25, 26, 28, 29, 33, 34, 36
						Drinking	2, 4
Earthen pot	25	10	5	160 (hanging)	1	Drinking and Bathing	13
						Drinking	2, 7, 27
Cement pond	122	43	38	38	1	Drinking and Bathing	1, 5, 6, 10, 17, 20, 24, 36
						Drinking	2, 3, 4, 12, 32, 46, 47
Cement Pond	122	35	30	30	1	Bathing and Drinking	10, 11, 20, 24
Cement Pond	63	25	22	22	1	Bathing and Drinking	24, 26, 36,
<b>Sprinkler water on plants</b>							
Hibiscus Plant area	Occupies an area of 180 cm x 100 cm	130 (Plant height)			1	Bathing and Drinking	9, 10, 15, 16, 17, 18, 19, 21, 22, 23, 24, 28, 31, 33, 35, 36, 38, 39, 40, 41, 42, 43, 44, 45
						Drinking	30
Ixora Plant area	Occupies an area of 210 cm x 152 cm	125 (Plant height)			1	Bathing and Drinking	8, 9, 10, 11, 15, 17, 18, 19, 21, 22, 24, 28, 33, 35, 36, 37, 38

\*The numbers correspond to the list of species in Table 2.

**Table 2.** List of birds visiting the birdbaths in the home garden

Name	Status
1 Black Kite <i>Milvus migrans</i>	R
2 Rock Pigeon <i>Columba livia</i>	R
3 Spotted Dove <i>Streptopelia chinensis</i>	R
4 Asian Koel <i>Eudynamis scolopacea</i>	R

5 Greater Coucal <i>Centropus sinensis</i>	R
6 White-throated Kingfisher <i>Halcyon smyrnensis</i>	R
7 White-cheeked Barbet <i>Psilopogon viridis</i>	R
8 Indian Golden Oriole <i>Oriolus kundoo</i>	M
9 Black-naped Oriole <i>O. chinensis</i>	M
10 Black-naped Monarch <i>Hypothymis azurea</i>	M

11	Indian Paradise-flycatcher <i>Terpsiphone paradisi</i>	R
12	Large-billed Crow <i>Corvus macrorhynchos</i>	R
13	Cinereous Tit <i>Parus cinereus</i>	R
14	Red-whiskered Bulbul <i>Pycnonotus jocosus</i>	R
15	Tickell's Leaf Warbler <i>Phylloscopus affinis</i>	M
16	Sulphur bellied Warbler <i>P. griseolus</i>	M
17	Greenish Leaf Warbler <i>Seicercus trochiloides</i>	M
18	Green Leaf Warbler <i>S. nitidus</i>	M
19	Western Crowned Leaf Warbler <i>S. occipitalis</i>	M
20	Clamorous Reed Warbler <i>Acrocephalus stentoreus</i>	M
21	Blyth's Reed Warbler <i>A. dumetorum</i>	M
22	Booted Warbler <i>Iduna caligata</i>	M
23	Sykes's Warbler <i>I. rama</i>	M
24	Common Tailorbird <i>Orthotomus sutorius</i>	R
25	Yellow-billed Babbler <i>Turdoides affinis</i>	R
26	Oriental White-eye <i>Zosterops palpebrosus</i>	R
27	Common Myna <i>Acridotheres tristis</i>	R
28	Jungle Myna <i>A. fuscus</i>	R
29	Blue-capped Rock Thrush <i>Monticola cinclorhyncha</i> [39]	M



[39] Blue-capped Rock Thrush

30	Tickell's Thrush <i>Turdus unicolor</i>	M
31	Oriental Magpie Robin <i>Copsychus saularis</i>	R
32	Indian Blue Robin <i>Luscinia brunnea</i>	R
33	Asian Brown Flycatcher <i>Muscicapa dauurica</i>	M
34	Brown-breasted Flycatcher <i>M. muttui</i>	M
35	Taiga Flycatcher <i>Ficedula albicilla</i>	M
36	Kashmir Flycatcher <i>F. subrubra</i>	M
37	Verditer Flycatcher <i>Eumyias thalassinus</i> [40]	M



[40] Verditer Flycatcher.

38	Blue-throated Blue Flycatcher <i>Cyornis rubeculoides</i> [41]	M
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[41] Blue-throated Blue Flycatcher.

39	Tickell's Blue Flycatcher <i>C. tickelliae</i>	R
40	Pale-billed Flowerpecker <i>Dicaeum erythrorhynchos</i>	R
41	Purple-rumped Sunbird <i>Leptocoma zeylonica</i>	R
42	Purple Sunbird <i>Cinnyris asiaticus</i>	R
43	Loten's Sunbird <i>C. lotenius</i>	R
44	Forest Wagtail <i>Dendronanthus indicus</i>	M
45	Grey Wagtail <i>Motacilla cinerea</i>	M
46	Indian Pond Heron <i>Ardeola grayii</i>	R
47	Cattle Egret <i>Bubulcus ibis</i>	R

