

MARKO HALONEN

Summary

The Katara Cultural Village and its park in Doha, Qatar was studied between September 2019 and June 2020. The purpose was to a) determine the abundance and breeding category of bird species, and b) to anthropologically observe the human–bird relationships. In this study it became evident that a park such as this is an important resting/wintering station for dozens of bird species, and some ten species also breed in the area. The study of areas like this shows on one hand that urban environments can be rich in avifauna, perhaps even more so than natural environments. On the other hand, in city-state like Qatar most people get their only contact with animal life in such areas, which is also a challenge for the future.

Observing avifauna and its anthropical impact at Katara, Doha, Qatar.

Introduction

Qatar's capital Doha, like many areas around the Gulf, has during the past 60 years experienced one of the most dramatic transformations of modern urban history. A pearling town of perhaps 10 000 people after WW2, Doha is now a booming metropolis with over two million inhabitants. The city is also a good example to demonstrate that our age is for a good reason labelled as the Anthropocene in natural history. Hardly anything in Doha (or Qatar) escapes human influence. Although urbanisation is only one of the elements that make up the Anthropocene, it has also been identified as a megatrend, which seems to be continuing and accelerating for the foreseeable future.

Yet many ornithological publications, both academic and popular, tend to focus on natural environments which are minimally, if at all affected by humans. Some go as far as excluding species which are present, sometimes even commonly, but are considered introduced and thus alien.¹ Some species are also considered invasive, meaning threatening to some other species. Together these invasive alien species are considered very bad, such as the Common Myna.

The urban landscape of Doha includes numerous large green areas, including two golf courses, many large parks and also artificial wetlands (sewage treatment facilities). The Katara Cultural Park is one of the many new developments being erected during the past decade. It is a combination of an arboretum, a recreational green area, a residential quarter and a showroom for neo-traditional architecture. Avifauna at Katara Park serves as a good example of how urban development can alter birdlife in Doha, and more generally in urban areas around the Gulf.

Methods

The study site, Katara Cultural Village and its park, is located between the Westbay area (Doha's financial centre with its famous skyscrapers) and the Pearl (a lush residential area built on artificial islands.) The area is limited in the west by a highway, in the north by a canal, in the east by the

¹ Some good examples are the exclusion of the Canada Goose *Branta canadensis* and Pheasant *Phasianus colchicus* in del Hoyo 2020, although both are relatively common. Similarly reintroduced Austrich *Struthio camelus* in Porter&Aspinall 2015.

Gulf, and in the south by the empty desert/wasteland spot, which is currently being developed into a new park ('the 5/6 Park'.) The Al-Aalia Island IBA is only c. 1 km to the north-east of the study site.



Google maps.

Most of the studied area in the west and in the north is a green park, mainly covered by grass, but contains also scattered trees and bushes, labelled in the style of an arboretum. It is prohibited to have picnics, to sit or to cycle on the grass; only pedestrians are allowed. The grass is watered so heavily, that this creates an artificial sewage stream, which runs from under the park into the Gulf. There is also another artificial stream, which runs into a little pond, and from there into the sewage

system. The pond, however, is so small and disturbed by human activity that no ducks or other water birds were ever seen using it. The cultural village covers most of the area in the middle, including an artificial ‘old town’ with its narrow lanes, courtyards, restaurants, fountains and mosques, as well as a small harbour. This artificial old town is very interesting also from the perspective of ornithology, as the area houses the headquarters of the Qatar Falconry Association. There is also a very large triple dovecote, with dozens of holes suitable as nests for both Feral Pidgeons (*Columba livia domestica*) and other species (see below.) The dovecote, like the entire village, is built as a fascinating blend of architecture influenced by traditional Gulf architecture, Ottoman and Western styles. The eastern part of the area is a public beach, next to which there are some quays. On the south side of the area there is a very large parking lot which during the winter serves partially as a food and flower market, also attracting birds. At the very southern end of the area there are two hotel and residential complexes: the Doha Intercontinental and the Marriot St. Regis, both of which are surrounded by green areas.



A view from the north-side of the Park: water is running, and the grass is green. Qatar’s falconry association’s HQ in the background (the red ‘falcon-hood’. Photo by the author.

The main observation method was a weekly walk around the area on a set path, counting the minimum amounts of birds either seen or heard. I also tried to localise nests, but this was only done by using the spotting scope and/or binoculars, not by venturing into the bushes or climbing trees. Special attention was paid on trying not to count the same bird twice. Care was also taken to minimise distraction to the birds. Observation was made with a 45x spotting scope and 8x binoculars. No sounds nor baits were used to attract the birds. Birds were never approached again if they were accidentally disturbed to take flight.

The weekly rounds were supplemented by incidental observations in and around the author's home, which was inside the study area. The covid-19 situation either restricted or at times prohibited moving in the area particularly in April and May 2020. I was then restricted to mainly stationary observation from my 6th-floor home. The count nevertheless provides a good overall picture of the most common birds during different seasons, particularly autumn and winter.

An abundance statement is given for each species (in a similar fashion as *eg* in Campbell & Smiles 2021.) However, in this study the statement follows a logarithmic scale, (as in *eg* Keller et al. 2020, 26), except that the scale here is binary instead of denary, which is more suitable for a small study area of only c. 1km². The abundance statements and the limits of the binary logarithmic scale are thus the following:

Very scarce: up to 4 individuals

Scarce: 5-8 individuals

Quite common: 9-16 individuals

Common: 17-32 individuals

Very common >32 individuals

The third column gives the breeding category and atlas code, the style of which follows Keller et al. 2020, 25. This, like the abundance statement above are based on the observations made by the author.

Possible breeding

A1 Species observed in breeding season in possible nesting habitat

A2 Singin male(s) present (or breeding calls heard) in breeding season

Probable breeding

B3 Pair observed in suitable nesting habitat in breeding season

B4 Permanent territory presumed through registration of territorial behaviour (song etc.) on at least two different days a week or more apart at the same place

B5 Courtship and display

B6 Visiting probable nest cite

B7 Agitated behaviour or anxiety calls from adults

B8 Brood patch on adult examined in the hand

B9 Nest building or excavating of nest hole

Confirmed breeding

C10 Distraction display or injury feigning

C11 Used nest or eggshells found (occupied or laid within period of survey)

C12 Recently fledged young (nidicolous species) or downy young (nidifugous species)

C13 Adults entering or leaving nest site in circumstances indicating occupied nest (including high nests or nest holes, the contents of which cannot be seen) or adult seen incubating

C14 Adult carrying a faecal sac or food for young

C15 Nests containing eggs

C16 Nests with young seen or heard

Taxonomy follows that of OSME.

Results

A total of 64 species were observed during the survey, as shown in the table below. According to the chosen method for an abundance statement, most of the species (53) were very scarce, three

were scarce, one quite common, three common, and five very common. Three species are possible, six probable and six confirmed breeders.

Discussion

The very scarce species are mainly migrant or vagrant species, some of which were only observed once. These are typically migrant or vagrant birds which opportunistically seek food, water and shelter in the trees, bushes and lawns of the park. Some, however, require further comments. House Crow *Corvus splendens* and Spanish Sparrow *Passer hispaniolensis* are possible breeders, although the latter is much more of 'farm bird' in Qatar. Species from the families of *Muscicapidae*, *Lanidae*, *Sylviidae* and *Motacillidae* are quite often present in the area, which is not surprising taking into consideration the large open green areas of the park. Without human presence, the terrain would be desert or scrub, offering much less water and food for eg *Motacillidae* and *Sylviidae*, although for some species this might also offer a comparative advantage, such as some of the *Muscicapidae* and *Lanidae* (Winkler *et al* 2015). Many desert species, such as Crested Lark *Galerida cristata* of Rufous-tailed Scrub-Robin *Cercotrichas galactotes*, can quite certainly be in a disadvantageous position in terms of competition.

A pair of Common Kestrels *Falco tinnunculus* had a nest in the area, and they were seen hunting in the park on a regular basis. Typical prey seemed to be an unidentified lizard or beetle, both of which are common in the park. Kestrels were not seen chasing birds.

Probable breeders among the very scarce species in or near the study area include also Osprey *Pandion haliaetus*, Graceful Prinia *Prinia gracilis*, Ring-necked Parakeet *Psittacula krameri*, and Crested Lark *Galerida cristata*. The population of the Rose-ringed Parakeet is considered to be originating from escapes according to Porter and Aspinall 2015, 182; but Collar *et al* 2021 leave this question open. They also mention, that on Zanzibar the disappearance of Ring-necked Parakeet has been linked to the increase of House Crows *Corvus splendens*. There might be a similar connection in Doha: Gillespie, Eriksen & Eriksen 2011 implies a larger Qatari population for Rose-ringed parakeet, and a very limited, mainly insular, population for House Crow.

Grey Francolin *Ortygornis/Francolinus pondicerianus* is scarce breeder in the area, observed with chicks. I have personally seen people catching Francolin chicks in Qatar, but not within these survey.

Most marine species, like the Black-headed Gull *Chroicocephalus ribibundus*, Caspian Gull *Larus cachinnans* and Lesser Black-backed Gull *Larus fuscus* are only wintering in the area, and were mainly present while opportunistically looking for food, such as leftovers from visitors to the park.

Nightjars, identified as Egyptian Nightjars *Caprimulgus aegyptius* seemed to be drawn into the park by its lights, which are on throughout the night.

Of the three common species Collared Dove *Streptopelia decaocto* breeds in the area. The nest is typically built in fork of a tree branch. Collared Doves, like other *Columbidae*, were often seen drinking water from swimming pools. Several *Columbidae* were also observed being seriously ill, but it is impossible to be certain of the reason. Also Indian Silverbills *Euodice malabarica* are common in the area, and probable breeders. They seem to be particularly fond of the thick hay-like roadside bushes, which are regularly cut and then left to grow again.

All the very common species are also confirmed breeders (Rock/Feral Dove *Columba livia*, Laughing Dove *Streptopelia senegalensis*, White-eared Bulbul *Pycnonotus leucotis*, Common Myna *Acridotheres tristis* and House Sparrow *Passer domesticus*.) All of these species clearly

benefit from anthropical impact, as is commonly known. Both residents and workers were observed leaving leftovers (typically breadcrumbs), typically picked up by the above-mentioned-birds.

Only children were observed chasing birds, but never harming. The general attitude seems to be benevolent towards avifauna, although some resident described bird droppings as a nuisance on balconies, pools etc. I was reported, and shown a picture of, an Osprey *Pandion haliaetus*, with a rope around its leg. Such ropes are typically used in falconry, which implies an attempt to catch an Osprey for one purpose or another. A certain case of a falconry escape is bird of prey which I identified to be a Black Falcon *Falco subniger* (an Australian endemic, del Hoyo 2020, 356). It was seen flying loose, but hitting a window of residential building, after which it was wrapped to a blanket and carried away by an employee, who later confirmed to me that he had called the falconry association, after which the owner had come to pick the falcon up. Some stray cats and dogs were also observed in the area, but these were not many. In case of the stray dogs at least, security guards were actively chasing them away from the area.



Black Hawk *Falco subniger*: escape from falconry by a swimming pool. Photo by the author.

House Sparrow *Passer domesticus* and Common Myna *Acridotheres tristis* and White-eared Bulbul *Pycnonotus leucotis* all had several nests in cavities of buildings, and also in the large dovecote of the cultural park. Laughing Dove *Streptopelia senegalensis* had several nests on top or in the ‘pockets’ of the trunk of palm trees. The White-eared Bulbul is by far more common than the Red-vented Bulbul *Pycnonotus cafer*, of which only a few individuals/pairs were observed. There is no indication of the former replacing the latter, as seems to be the case in Pakistan (Fishpool & Tobias 2020). As there is no information concerning subspecies of the White-eared Bulbul in the most

commonly used ID-guide of the area (*ie* Porter & Aspinall 2015), more detailed study would be beneficial, because *P. leucotis leucotis* is considered to be the subspecies of South-Asia, and *P. leucotis dactylus* of the Gulf (Fishpool & Tobias 2020).



Typical road-side bushes and gardens between the road and residential towers. Indian Silvebills were often seen frequenting the bushes, Laughing doves and Eurasian Collared Doves had nests in

the palm and the smaller trees, and Rock Doves/Feral Pidgeons, Common Mynas and House Sparrows in the cavities of the building behind. Photo by the author.

Urban landscapes will inevitably be increasing in Qatar in the future. This will thus be a biotope living in which more and more species will have to adopt to, or to perish. A key issue which determines the possibilities of biodiversity in urban areas is to what extent cities will have green areas allowing fauna and flora (introduced or native) to flourish in relative tranquillity. Once made ready, urban parks are usually free from hunting pressure and further development which can be very beneficial for birdlife in the long term. On the other hand, very hard-handed ‘maintenance’ and efforts to get rid of the ‘nuisance’ of birds can also quickly become counter-productive. Most people in Qatar, either tourists or residents, are not there with the primary purpose of observing wildlife. Actually, most people arguably mainly see animals (except for pets and touristy camels) in the ‘artificial oases’ of parks. Qatar was somewhat lacking in environmental sustainability agendas in the first two decades of the millennium (Luomi 2012, 143.). However, this might change in the future as the biodiversity crisis gains more international attention and Qatar wants to be active in the matter. A question which is far from irrelevant is how conservation efforts should be split between the ‘natural’ and ‘anthropical’ environments. The division itself can be seen as anthropocentric; from avian perspective no such division exists, of course.



Curlew is an example of a species which almost certainly would not winter and rest in the area without its ‘artificial oases’. Photo by the author.

As this study shows, rather unsurprisingly, the most common bird species of an area with a high anthropical impact are birds which are commonly observed in urban environments. The more important question to ask is whether or not these species should be considered a) alien, b) invasive or c) alien invasive, and what consequences will this consideration imply.

Common Mynas *Acridotheres tristis* were often seen trying to chase sparrows out of their nests in cavities, but usually would not fit in. Mynas were even observed chasing also chasing Rock/Feral Doves *Columba Livia* in spite of the difference in size in favour of the doves. During the winter of 2019/2020 rather large swarms of locusts were observed in Qatar, and in the Katara Park you could see them in every bush and tree for couple of weeks. During this time Common Mynas *Acridotheres tristis* were commonly seen chasing and eating locusts (they caught the locust, hit it against the ground and then swallowed whole). This behaviour not only gives the species its scientific name, gloomy locust-hunter (Jobling 2011), but also is one of the reasons for its wide range. It has historically been imported to various parts of the world in order to help pest-control. According to Porter & Aspinall 2015 only the Iranian population is native in the Middle East.

This also applies to Rose-ringed Parakeet *Psittacula krameri*, a probable breeder, although very scarce, in this study. It is considered as an alien species in Qatar by the IUCN, but its invasiveness in ‘unspecified’ (IUCN 2022). However, Qatar and the entire Gulf region has for millennia been a major trade route between Mesopotamia, the Iranian Plateau, India and even East-Asia (Fromhertz 2017, 43). It is more than likely that birds have deliberately or accidentally been brought from one place to another either as pets or some other reason. Many species of ‘alien’ origin can actually have a surprisingly long historical presence in the area, making the distinction between alien–invasive–alien invasive rather subjective.

The same goes for Rock/Feral Doves *Columba livia*, which have traditionally been kept in dovecots that you can still see here and there in the Qatari-countryside. Some commonly used books have decided to exclude ‘feral’ and ‘introduced’ species/subspecies altogether such as Feral Dove (Gillespie, Eriksen & Eriksen 2011), Common Ostrich *Struthio camelus* (Porter & Aspinall 2015) and Alexandrine and Rose-Ringed Parakeets *Psittacula eupatria* & *P. krameria* (del Hoyo 2020). This might be scientifically logical in order to make a distinction between the ‘native’ and ‘introduced’ populations, but it will on the other hand give the general audience the misleading idea that a species or subspecies is not present in the area. In the worst case, observers might deductively exclude a species which is not supposed to be there, and thus participate in citizen science in an unproductive way, *eg* when using eBird. Thorough historical research would be much needed to determine the historical presence of these species in Qatar. A similar study has recently been published regarding Cyprus (Flint 2019).

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Dr. Marko Halonen, visiting researcher at the University of Helsinki
marko.halonen@alumni.helsinki.fi

Appendix: List of observed species with abundance statements, breeding categories and atlas codes.

Species	Abundance statement	Breeding category and atlas code
Grey Francolin - <i>Ortygornis pondicerianus</i> ²	Scarce	A1
Rock Dove - <i>Columba livia</i>	Very common	C13
Collared Dove - <i>Streptopelia decaocto</i>	Common	C13
Laughing Dove - <i>Streptopelia senegalensis</i>	Very common	C13
Namaqua Dove - <i>Oena capensis</i>	Very scarce	-
Egyptian Nightjar – <i>Caprimulgus aegyptius</i>	Very scarce	-
Pallid Swift - <i>Apus pallidus</i>	Very scarce	-
Whimbrel - <i>Numenius phaeopus</i>	Very scarce	-
Eurasian Curlew - <i>Numenius arquata</i>	Very scarce	-
Ruddy Turnstone - <i>Arenaria interpres</i>	Very scarce	-

² *Francolinus pondicerianus* according to OSME Region List of Bird Taxa. Version 7.1: July 2021.

Black-headed Gull - <i>Chroicocephalus ridibundus</i>	Common	-
Caspian Gull - <i>Larus cachinnans</i>	Very scarce	-
Lesser Black-backed Gull - <i>Larus fuscus</i>	Very scarce	-
Whiskered Tern - <i>Chlidonias hybrida</i>	Scarce	-
Great Cormorant - <i>Phalacrocorax carbo</i>	Very scarce	-
Socotra Cormorant - <i>Phalacrocorax nigrogularis</i>	Very scarce	-
Grey Heron - <i>Ardea cinerea</i>	Very scarce	-
Western Reef-Heron - <i>Egretta gularis</i>	Very scarce	-
Osprey - <i>Pandion haliaetus</i>	Very scarce	B5
Eurasian Hoopoe - <i>Upupa epops</i>	Very scarce	-
Blue-cheeked Bee-eater - <i>Merops persicus</i>	Very scarce	-
European Bee-eater - <i>Merops apiaster</i>	Quite common	-
Eurasian Wryneck - <i>Jynx torquilla</i>	Very scarce	-
Lesser Kestrel - <i>Falco naumanni</i>	Very scarce	-
Common Kestrel - <i>Falco tinnunculus</i>	Very scarce	C13
Barbary Falcon - <i>Falco (peregrinus) peregrinoides</i>	Very scarce	-
Ring-necked Parakeet - <i>Psittacula krameri</i>	Very scarce	B3
Red-backed Shrike - <i>Lanius collurio</i>	Very scarce	-
Turkestan Shrike - <i>Lanius phoenicuroides</i>	Very scarce	-
Isabelline Shrike - <i>Lanius isabellinus</i>	Very scarce	-
Brown Shrike - <i>Lanius cristatus</i>	Very scarce	-
Masked Shrike - <i>Lanius nubicus</i>	Very scarce	-
House Crow - <i>Corvus splendens</i>	Very scarce	A1
Crested Lark - <i>Galerida cristata</i>	Very scarce	B3
Graceful Prinia - <i>Prinia gracilis</i>	Very scarce	B9
Eastern Olivaceous Warbler - <i>Iduna pallida</i>	Very scarce	-
Red-vented Bulbul - <i>Pycnonotus cafer</i>	Scarce	B3
White-eared Bulbul - <i>Pycnonotus leucotis</i>	Very common	C13
Willow Warbler - <i>Phylloscopus trochilus</i>	Very scarce	-
Common Chiffchaff - <i>Phylloscopus collybita</i>	Very scarce	-
Eurasian Blackcap - <i>Sylvia atricapilla</i>	Very scarce	-
Barred Warbler - <i>Curruca nisoria</i>	Very scarce	-
Menetries's Warbler - <i>Curruca mystacea</i>	Very scarce	-
Common Whitethroat - <i>Curruca communis</i>	Very scarce	-
Common Myna - <i>Acridotheres tristis</i>	Very common	C13
Song Thrush - <i>Turdus philomelos</i>	Very scarce	-
Spotted Flycatcher - <i>Muscicapa striata</i>	Very scarce	-
Rufous-tailed Scrub Robin - <i>Cercotrichas galactotes</i>	Very scarce	-
Semicollared Flycatcher - <i>Ficedula semitorquata</i>	Very scarce	-
Common Redstart - <i>Phoenicurus phoenicurus</i>	Very scarce	-
Northern Wheatear - <i>Oenanthe oenanthe</i>	Very scarce	-
Isabelline Wheatear - <i>Oenanthe isabellina</i>	Very scarce	-

Pied Wheatear - <i>Oenanthe pleschanka</i>	Very scarce	-
Indian Silverbill - <i>Euodice malabarica</i>	Common	B4
House Sparrow - <i>Passer domesticus</i>	Very common	C13
Spanish Sparrow - <i>Passer hispaniolensis</i>	Very scarce	A1
Pale Rockfinch - <i>Carospiza brachydactyla</i>	Very scarce	-
Western Yellow Wagtail - <i>Motacilla flava</i>	Very scarce	-
Citrine Wagtail - <i>Motacilla citreola</i>	Very scarce	-
Pied Wagtail/White Wagtail - <i>Motacilla alba</i>	Very scarce	-
Tawny Pipit - <i>Anthus campestris</i>	Very scarce	-
Tree Pipit - <i>Anthus trivialis</i>	Very scarce	-
Buff-bellied Pipit - <i>Anthus rubescens</i>	Very scarce	-
Ortolan Bunting - <i>Emberiza hortulana</i>	Very scarce	-