

First confirmed evidence of Barn Swallows *Hirundo rustica* breeding on the Arabian peninsula

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The Barn Swallow *Hirundo rustica* crosses the Arabian peninsula on migration to and from wintering areas in Africa and during these times many can be seen in the skies. It has been suggested that some of these birds may be breeding in the peninsula but to date definitive evidence has not been available (Jennings 2010). In November 2013, while birding with Robert Tovey, we noticed some nests in a farm building at Al Hayer, south of Riyadh, Saudi Arabia. These nests were cup shaped and made of mud gobbets which looked very like those of some members of the swallow family. Most were in a poor state of repair and looked like they may not have been used for some time. In spring 2014 while birding in the area we spotted a flock of c20 Barn Swallows, some of whom were flying in and out of the building in question. The building was being used by farm workers at the time so we did not enter. I returned to the site in October 2014 and noticed that many of the nests had been smashed but one which was accessible had a feather lining still in place indicating that they may have been used that year. On 14 February 2015 I visited the site again and found a considerable number of Barn Swallows flying in and out of the farm building at regular intervals. On entering the building there were 10 nests, some of which were damaged but three of the nests had sitting birds (Plate 1) and I witnessed one pair beginning to repair one of the damaged nests. I could only get access to one of the nests and found it had a clutch of 4 eggs (Plate 2). As all the other nests were too high to access I left the area to avoid disturbing the birds but took a number of photos. I returned to the site ten times over the next three months to monitor activity (Plates 1–8).

BREEDING AND FEEDING LOCATION.

The breeding site (24° 21' 30" N, 46° 56' 00" E, 430 m asl, Plate 5) is c25 km south of Riyadh and c4 km southeast of Al Hayer town. The area comprises several farms which have



Plate 1. Barn Swallow *Hirundo rustica* guarding nest number 8, Al Hayer, Saudi Arabia, 14 February 2015. © Bernard Bracken



Plate 2. Clutch of four Barn Swallow *Hirundo rustica* eggs, nest eleven, Al Hayer, Saudi Arabia, February 2015. © Bernard Bracken



Plate 3. Sitting Barn Swallow *Hirundo rustica*, nest three, Al Hayer, Saudi Arabia, 14 February 2015. © Bernard Bracken



Plate 4. Feeding Barn Swallow *Hirundo rustica* nestlings, nest three, Al Hayer, Saudi Arabia, 14 March 2015. © Bernard Bracken



Plate 5. View of the farm building, Al Hayer, Saudi Arabia. Note reed bed in the middle right, date palms and straw for the cattle pen to the left, 13 July 2015. © Bernard Bracken

grown up over the years using water from the Riyadh river, a waste water outflow from the city. Along much of its length the river is overgrown with reeds (mainly *Phragmites*) which are cut back from time to time by farmers or they get burned off in accidental fires. It is an important area for wildlife and provides a key stopover point for birds on migration. The building housing the colony of Barn Swallows is c10×5 m and located near the centre of the fields through which the river flows. The building's door was always left open and usually at least half of the windows also. The location is particularly good for insects. In spring the nearby reed bed, river and cattle pen provide ideal breeding grounds for a diverse insect population. The birds appeared to feed within a few hundred metres of the nest site. The fields were being used to grow hay for farm animals.

NEST SITES

During 2015 the number of nests grew from ten to fourteen, although only nine were in use. The ten original nests were in various states of repair, some relatively intact, others smashed. Nests that I numbered one, four, five, nine and twelve were not used by the swallows. Nest nine survived from the previous year but had been taken over by a pair of Laughing Doves *Spilopelia senegalensis* who raised two broods there. Nest twelve was partly constructed in early May and the basic mud cup was formed but this too was taken over by a Laughing Dove. On my first visit in 2015, 14 February, nests three, eight and eleven had sitting birds. Nests six and fourteen were being repaired having been damaged over



Plate 6 (left). Barn Swallow *Hirundo rustica* nest thirteen completed and in use, 27 March 2015, Al Hayer, Saudi Arabia. © Bernard Bracken

Plate 7 (right). Barn Swallow *Hirundo rustica* nest seven completed and in use, 20 March 2015, Al Hayer, Saudi Arabia. © Bernard Bracken

the winter. A pair had just commenced building nest thirteen which, unlike the others, was constructed as a circular platform around a cable hanging from the ceiling (Plate 6). A few weeks later nest ten was built by another pair, also hanging from electricity cables. There was ample space around the walls for these birds to build a cup shaped nest so why these locations were selected is unclear. A pair had also commenced work on a new nest, number seven, by 20 February (Plate 7). Nest two was built from scratch immediately over the doorway but was not completed until the first week in April. All nests were built of mud gobbets and lined with straw and feathers. Mud was readily available from the river bank and some birds were also seen collecting it from nearby roadside pools created by water-truck spillage.

The spacing of the nests inside the building was perhaps unusual. It was suggested by Juana (2012) that even in colonies, nesting Barn Swallow males defend a territory of c5 m around the nest. The nests on the south wall of the building had a much smaller spacing, a little under a metre. Nest seven, which was built from scratch in 2015, was constructed in the usual way by the pair and was a standard cup shape attached to the wall (Plate 7). Two broods were raised. However, once the second brood had left nest seven the birds added higher walls making the nest 5 or 6 cm deeper. A similar addition had been made to nest five at some point in previous years.

BREEDING SUCCESS

Breeding commenced at this site fairly early compared with other parts of the Barn Swallow's range. Turner & Rose (1989) noted that the breeding season is generally April–August but as early as March in some southerly regions. At the present site there were four eggs in nest eleven 14 February. If we assume laying intervals of one day between eggs (Møller 1994) then laying started in nest eleven around 10 February or maybe a little earlier.

I took note of the number of eggs in each of the nests starting from the first weekend in April as up to that point I could not access many of them due to their height. Møller (1994), in Denmark, found the average clutch size for Barn Swallows was 4.93 eggs and all of first clutches at the Al Hayer site had 4 eggs (8 nests, 4 eggs/nest). All of these nests had a second brood with the exception of nest eleven. I recorded eggs in nest eleven on my first visit in mid February and at one point I thought that this nest had been abandoned as I rarely encountered a sitting bird and the eggs did not seem to be developing. However, in late March they hatched, but too late I suspect for a second brood.

The second clutches at this site had four eggs each, with the exception of nest ten which had a clutch of seven eggs (Plate 8). Possibly the latter second clutch may have been added to by another female. Nest two was built in late March and I suspect there was no time to produce a second brood. (second brood, 7 nests 4 eggs/nest and 1 with 7 eggs). No pair attempted a third brood, possibly due to higher temperatures (in April these rose to 45°C).

I was only able to attend the site at weekends so only witnessed the fledging of one of the nest occupants but from what I could make out all of the nests fledged successfully. I base this on checks I made around the area looking for dead chicks and broken eggs and found none. Additionally, the number of chicks in each case matched with the earlier counts of eggs. There is always the possibility that some did die and were gone in the time between visits but I am reasonably certain that the majority of the 67 eggs recorded made it to fledging. I returned to the area fairly regularly since the final nestlings fledged and spotted a good number (c30–35) feeding around the area. The Barn Swallow is breeding in the Arabian peninsula and possibly has been doing so since at least 2012 and maybe earlier.

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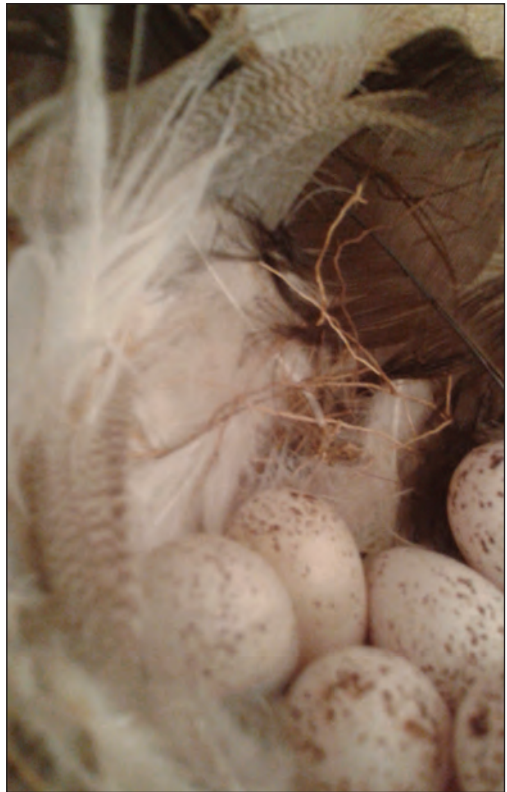


Plate 8. Barn Swallow *Hirundo rustica* nest ten with clutch of 7 eggs, 28 March 2015, Al Hayer, Saudi Arabia.
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