

# Migration of harriers and other raptors at Ashura Deh, Iran, April 2008

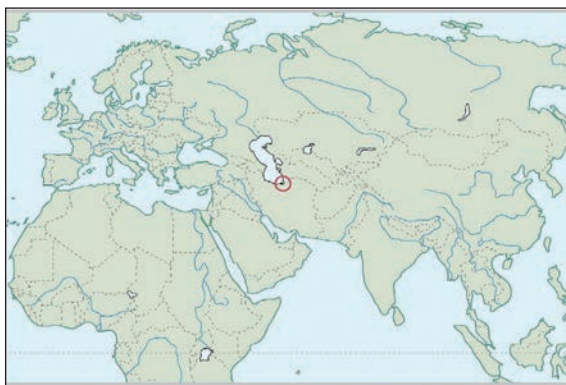
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Ashura Deh is a small Iranian island in the extreme southeastern corner of the Caspian sea (Figures 1 & 2). It is separated by a small stretch of water from Mian Kahle to the west, a narrow 50 km long sand spit that separates Gorgan bay from the Caspian (Figure 3). During short visits to Mian Khale nature reserve and Ashura Deh on 24 April 2002, 20 April 2004, 21 April 2005 and 23 April 2007, Magnus Ullman witnessed a minor passage of harriers *Circus* spp and Black Kites *Milvus migrans*, most notably 26 Western Marsh Harriers *Circus aeruginosus* during 2–3 hours in the afternoon of 23 April 2007 at Ashura Deh.

Since harriers are less reluctant to cross large expanses of water than most raptors, they are normally not very numerous at the major raptor migration spots. Thus, only a mean of 4.2 Pallid Harriers *Circus macrourus*, 3.8 Montagu's Harriers *Circus pygargus* and 8.4 Pallid/Montagu's Harriers were recorded at Eilat, Israel, per spring, 1969–1980 (Christensen *et al* 1981).

Inspection of the maps of Gorgan bay and the southeastern Caspian region suggested that reasonable numbers of harriers moving on migration from their African wintering grounds to Central (Middle) Asian breeding areas might follow the narrow Mian Kahle sand spit and concentrate at Ashura Deh before crossing the 2.5 km of the Caspian sea on a northeast or east-north-east heading. Other small or medium-sized raptors, notably Steppe Buzzard *Buteo buteo vulpinus* and Black Kite, might also use the Mian Kahle 'flyway' to some extent.

However, to reach the southern shores of the Caspian sea, migrants arriving from the south must fly over the Elburz mountain range, which includes Damavand, the highest peak (5671 m asl) west of the Himalayas. This means that the vast majority of Steppe Eagles *Aquila nipalensis* and other large raptors heading for



**Figure 1.** Africa, Europe and Asia. A red circle marks the position of Ashura Deh in the southeastern corner of the Caspian sea. © Magnus Ullman



**Figure 2.** The vast majority of raptors migrating from Africa towards Central Asia pass Iran on a broad front. A red circle marks the position of Ashura Deh in the southeastern corner of the Caspian sea. © Magnus Ullman



**Figure 3.** Raptors migrating towards the east along the southern shores of the Caspian sea move along the long sand spit Mian Kahle and will eventually pass Ashura Deh island. © Magnus Ullman



**Plate 1.** Golden Spot, Ashura Deh, Iran. From left: Alireza Hashemi, Ramezanali Ghaemi and Mattias Ullman watching westwards. © Magnus Ullman

Central Asia and Siberia will not cross the Elburz but continue along its southern slopes to the east. Thus, we did not expect any large eagles or vultures at Ashura Deh.

We decided to further investigate Ashura Deh as a migration spot for harriers and to see whether this island was used generally by raptors on their way north. We chose a period, 4–18 April 2008, which might correspond with both the Pallid and Montagu's Harrier peaks.

## ASHURA DEH

Ashura Deh is a sensitive area for security being near the Iranian/Turkmenistan border and a nature reserve: access is obviously restricted. All the necessary permits were arranged by Ali Adhami of EcoTour-Iran, who also managed for us to stay in the warden's cottage where Hasan Almasi of Iran Department of the Environment/forester of the Ashura Deh nature reserve resided. Here we stayed together with Alireza Hashemi, who cooked our food and helped us in every way including scanning the sky for raptors. During

our second week, Alireza was replaced by Afshin Zareie. On many raptor count days we were also accompanied by Ramezanali Ghaemi, a very experienced naturalist.

We arrived in the morning of 4 April, and were shown around the eastern part of Ashura Deh by Hasan Almasi. Among other places he took us to a slight elevation in an area of dry dunes with low bushes and a marsh where we had excellent views right across the island from north to south. This seemed a vantage point to cover any migration, was named 'Golden Spot', and proved to be the best site during our stay (Plate 1). However, during days of strong northerly winds we shifted to an area near the southern shore for better coverage.

The weather was similar throughout the period although we had gale force winds one afternoon and night; very dramatic for the local fishermen in their small boats. Usually, however, the weather was clear and calm in the morning after which the sky clouded over slowly and a westerly or north-westerly wind arose, often becoming quite fresh in the early afternoon (Plate 2). Towards the evening, winds lulled and by and by stars gleamed brightly from a clear sky. These weather conditions were probably influenced by local factors, such as the Caspian sea and Elburz mountains being separated by several km of flat lowland as well as enormous desert areas to the south of the Elburz.

## RAPTOR COUNTS

On most days we actively watched for migrating raptors c08.00–18.00 h. Before 08.00 h, we watched from the veranda of the warden's cottage during breakfast and generally also spent some time looking for passerine migrants in the shrubberies of the eastern part of the island. Although we consider that few raptors left the island before 08.00 h, we may have missed single early morning birds. On several mornings one of us started raptor watching well before 8 (while the other checked for passerines). On some occasions when raptor movements were poor, we walked around the island looking for other birds. However, this still gave us good opportunities to cover raptor passage since the island is very flat and vegetation mainly is low shrubbery except for a vast marshy area just north of Golden Spot. A total of 2183 migrant raptors were recorded 4–18 April (Table 1).

## PALLID HARRIER

Ashura Deh's potential as a hot spot for migrating harriers soon became obvious. On the first day with decent migratory weather, 5 April, we recorded 53 Pallid Harriers (Table 2), perhaps the largest single day Pallid Harrier migration count anywhere. Numbers fell the next few days (27, 15, 2) and we wondered whether Pallid Harrier migration was quickly tailing off. However, since adult males still constituted a substantial portion of the migrating birds we suspected that we were not yet near the end of Pallid Harrier migration. This proved correct. Daily figures of 26 (10 April) and 39 (12 April) were followed by a couple of more days with over 20 Pallid Harriers. In total, we recorded 263 birds in just two weeks (Plates 3–6).



**Plate 2.** The male Pallid Harriers *Circus macrourus* were gliding fast in the fresh afternoon wind. Third cy male Pallid Harrier, 10 April 2008, Ashura Deh, Iran. © Magnus Ullman

**Table 1.** Daily totals of raptors at Ashura Deh, Iran, 4–18 April 2008.

Date	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
Lesser Kestrel <i>Falco naumanni</i>		5	1	1			7	6	4	3	5	2	4	3	1	42
Common Kestrel <i>Falco tinnunculus</i>			11	28	2	1	38	5	6	4	6	2	7	3		113
Lesser/Common Kestrel <i>Falco naumanni/tinnunculus</i>							31	29	13	16	21	9	20	11		150
Merlin <i>Falco columbarius</i>		5	1	1			2		1	3	2	1	2	2		20
Eurasian Hobby <i>Falco subbuteo</i>													2			2
large falcon <i>Falco</i> sp														1		1
Osprey <i>Pandion haliaetus</i>				1	1		1	2		2	4			3		14
Black-winged Kite <i>Elanus caeruleus</i>														1		1
Black Kite <i>Milvus migrans</i>			17	71	4	3	34	7	5	7	10	47	186	31	2	424
Egyptian Vulture <i>Neophron percnopterus</i>				1	1						1					3
Western Marsh Harrier <i>Circus aeruginosus</i>		10	22	37	1		28	32	11	13	37	37	35	21		284
Hen Harrier <i>Circus cyaneus</i>			1	6	7	1		6	5	6	1	6		2	1	43
Pallid Harrier <i>Circus macrourus</i>	1	53	27	15	2	3	26	8	39	23	27	5	21	9	4	263
Montagu's Harrier <i>Circus pygargus</i>		2	3	1			2	1	5	5	3	2	8	6	1	39
Pallid/Montagu's Harrier <i>Circus macrourus/pygargus</i>								2	1					1		4
Northern Goshawk <i>Accipiter gentilis</i>		1	1	2	1		1	2		2	3		4	3		20
Eurasian Sparrowhawk <i>Accipiter nisus</i>		5	11	51	2	14	83	49	21	34	70	46	103	78		567
Steppe Buzzard <i>Buteo buteo vulpinus</i>		2	11	15	3	7	24	15	4	26	16	1	38	4	1	167
Long-legged Buzzard <i>Buteo rufinus</i>			2			1	2	1		1	1		1			9
Steppe Eagle <i>Aquila nipalensis</i>					1		2	1	2	4			3	1		14
Eastern Imperial Eagle <i>Aquila heliaca</i>								1			1					2
Booted Eagle <i>Aquila pennata</i>											1					1
Total	1	74	101	201	14	28	208	124	94	116	176	138	402	155	9	2183

**Table 2.** Daily totals of Pallid Harriers *Circus macrourus* at Ashura Deh, Iran, 4–18 April 2008.

Date	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
Ad. male	1	12	7	6			7		9	1	4		3	1	1	52
3rd cy male		7	2				3	1	2	2	6		1	1		25
Ad. female		30	7	4	1		3		3	3	3		1	1		56
Female-type			4	2	1	1	7	3	9	7	6		2	1		43
2nd cy		4	7	3		2	6	4	16	10	8	5	14	5	3	87
Total	1	53	27	15	2	3	26	8	39	23	27	5	21	9	4	263

**Table 3.** Totals per hour (grand total for each hour 4–18 April) of Pallid Harriers *Circus macrourus* at Ashura Deh, Iran, 4–18 April 2008.

Time of day	pre 8	8–9	9–10	10–11	11–12	12–13	13–14	14–15	15–16	16–17	17–18	18–19	post 19	Total
Ad. male		2	1	3	6	1	2	2	9	9	12	5		52
3rd cy male		2	2	1		2	2		4	5	4	3		25
Ad. female	1	4	5	2	2	7	4	1	3	11	15	1		56
Female-type	1	1	4	6	4	2	4	3	4	6	2	6		43
2nd cy	2	9	7	5	5	6	4	6	8	17	14	4		87
Total	4	18	19	17	17	18	16	12	28	48	47	19	0	263



**Plate 3.** Adult male Pallid Harrier *Circus macrourus*, 7 April 2008, Ashura Deh, Iran. © Magnus Ullman



**Plate 4.** Adult female Pallid Harrier *Circus macrourus*, 5 April 2008, Ashura Deh, Iran. © Magnus Ullman



**Plate 5.** Second cy female Pallid Harrier *Circus macrourus*. Second cy Pallid Harriers normally have moulted very little or nothing at all in spring. Dark iris shows this bird to be a female. 11 April 2008, Ashura Deh, Iran. © Magnus Ullman



**Plate 6.** Second cy male Pallid Harrier *Circus macrourus*. Pale iris shows this bird to be a male. Male 2nd cy Pallid Harriers often confirm their sex by new grey axillaries quite early in spring (while Montagu's in the corresponding plumage shows axillaries with bold maroon bars similar to adult males). 5 April 2008, Ashura Deh, Iran. © Magnus Ullman

Pallid Harrier is not known to concentrate at the regular raptor migration hot spots and the main site with a substantial passage of Pallid Harriers is the strait of Messina, Italy, where 132 Pallids passed during the entire spring February–May 2001 and the highest day total is 45 birds on 20 April 1998 (Corso 2005). At Eilat, Israel, 113 Pallid Harriers passed in spring 1985 and the highest day total is 38 birds, 3 April 1983 (Shirihai 1996).

Since the figure was so high on our second day of counting and since there still was a good passage as we left the island, we might have been able to double our total, to over 500 birds, if we had covered the entire spring. Ashura Deh may well be the best spot for migrating Pallid Harriers in the world.

Although our coverage was slightly poorer before 08.00 h, we believe that few Pallid Harriers passed before that time. From 08.00 h the passage was surprisingly uniform during each and every hour until 14.00–15.00 h when a slight decline is apparent in our data (Table 3). But from 15.00 h, numbers increased considerably and 54% of all Pallid





**Plate 7.** We recorded much lower numbers of Montagu's Harrier *Circus pygargus* than Pallid *C. macrourus*. Female Montagu's Harrier, 16 April 2008, Ashura Deh, Iran. © Magnus Ullman



**Plate 8.** Marsh Harrier *Circus aeruginosus* was the most common harrier at Ashura Deh, though only slightly more numerous than Pallid *C. macrourus*. Female-type Marsh Harrier, 6 April 2008, Ashura Deh, Iran. © Magnus Ullman

Harriers passed during the four hours 15.00–19.00 h (36% 16.00–18.00 h, no migrant Pallid Harriers were seen after 19.00 h). Fifty percent of adult males, 3rd calendar-year (cy) males, adult females and 2nd cy birds had passed by 15.00–16.00 h, while 50% of “female-type birds” had passed by 13.00–14.00 h, and 50% of 2nd cy birds by 14.00–15.00 h. This is surprisingly late in the day, since raptor migration generally peaks around noon or in early afternoon. Female-type birds (excluding adult females) and 2nd cy birds passed on average slightly earlier in the day than older birds. From 12.00–14.00 h, the Pallid Harriers passed quite high and were scattered and it is likely that some birds went unnoticed during these hours.

Of the 263 Pallid Harriers, 52 were identified as adult males and 25 as 3rd cy birds. This figure for 3rd cy birds is surprisingly high as 3rd cy is an age class that should comprise a very small part of the total population. This suggests that even some older males (4th cy and perhaps even older) may retain some of the darkish markings that normally are considered to define immaturity. It is likely that some of these birds were in fact ‘adult’.

## OTHER HARRIERS

We recorded less Montagu's Harriers and the grand total stopped at 39 birds (Plate 7). Even though we saw Montagu's nearly daily from 5 April, we perhaps missed both the peak and the majority of the birds. So we do not know how much later their passage is at Ashura Deh compared to the Pallid Harrier. We recorded virtually only adult Montagu's (exceptions: one 2nd cy male and 2 female-type birds of unknown age). This suggests that we experienced merely the beginning of the migration. It could be, of course, that Montagu's is considerably less numerous than Pallid Harrier at Ashura Deh. The wintering and breeding ranges of the two species are so similar that there is no reason to suspect that a larger proportion of Montagu's passage directed towards Central Asia should not occur at Ashura Deh.



**Plate 9.** A total of 43 Hen Harriers *Circus cyaneus* were recorded on migration at Ashura Deh. Yellow iris shows this bird to be a second cy male. 12 April 2008, Ashura Deh, Iran. © Magnus Ullman

It was no surprise that the most numerous harrier was Marsh Harrier, totalling 284 birds (Plate 8). Moreover, Marsh was the only harrier to frequently roost and hunt on the island, probably because the marshy habitat was particularly suitable for the species.

We had not expected many Hen Harriers *Circus cyaneus*, a species that, unlike the other three, does not migrate all the way to tropical Africa. However, Hen Harriers do winter in a quite large area of Iran and 43 birds were recorded on migration at Ashura Deh (Plate 9).

## **HARRIERS: SOME COMMENTS**

Virtually all the harriers moved along a very well-defined corridor, from the west of Ashura Deh east-north-east via the central part of the island, or slightly north of it, and left the island by its eastern shore. On the morning we arrived, 4 April, we saw from the boat an adult Pallid Harrier heading north over Gorgan bay, but apart from that one all birds arrived from the west. Moreover, occasional harriers left the island along the northern shore on a more northeasterly heading. Most other raptors were more sensitive to the more or less northerly winds and to a greater extent moved along the southern shore of the island, especially the larger eagles.

On a very few occasions we had difficulties in distinguishing Pallid and Montagu's Harriers, essentially birds that were poorly viewed due to great distance or short observation time (in spring it is normally 2nd cy Montagu's females that cause most confusion with Pallid Harrier; we saw nearly no 2nd cy Montagu's). On several occasions, however, we were uncertain whether an approaching harrier was a Hen or a Pallid, before it got close enough for positive identification.

## **KESTRELS**

A total of 305 kestrels migrated past Ashura Deh, including 150 birds, c50%, that were not identified to species, although Mattias in particular paid them a lot of attention. Kestrels are difficult to identify, especially as they often flew quite high. No single female Lesser Kestrel *Falco naumanni* was identified. Only males or birds in flocks were noted as 'Lesser Kestrel'. Of those identified, Lesser Kestrel constituted 27% (42 birds) which may indicate that reasonably healthy stocks occur further northeast (Plate 10). Counting was complicated by the presence of hunting birds, either migrants on stop over, Common

Kestrels *Falco tinnunculus* breeding on the island or visiting Lesser Kestrels from a large colony in Bandar Torkaman.

### OTHER RAPTORS

The most numerous raptor was Eurasian Sparrowhawk *Accipiter nisus*, totalling 567 birds. Siberian birds winter in the Arabian peninsula and tropical East Africa, so the comparatively high figure does not come as a surprise. In fact, this sparrowhawk is not likely to concentrate to a great extent along Mian Kahle–Ashura Deh as it apparently migrates on a broad front across much of Iran.

However, we were somewhat surprised when the first Northern Goshawk *Accipiter gentilis* passed on 5 April, and even more surprised as 1–4 birds migrated past us nearly daily. We noted 20 Northern Goshawks in total, presumably Siberian birds on their way home from their wintering grounds that occur as far south as northwestern Iran (Mansoori 2001).

The second most numerous species was Black Kite (424 birds), which often came in nice, well spaced groups of occasionally up to 20–30 birds and on one occasion 38 in one loose flock. Black Kite also accounted for the largest day count of any species, 186 birds on 16 April. This fairly large figure indicates that very large numbers pass through Iran on their way from tropical Africa to Central Asia and Siberia (Plate 11).

The next most numerous species, excluding Marsh and Pallid Harrier, was Steppe Buzzard (167 birds). Steppe Buzzard is the most common raptor moving from Africa through the Middle East to Central Asia and Siberia and our comparatively low figure is presumably due to the fact that the majority pass Iran on a broad front. Wherever in the



**Plate 10.** Lesser Kestrels *Falco naumanni* were observed nearly daily (14 April 2008, Ashura Deh, Iran). © Magnus Ullman



**Plate 11.** The Black Kites *Milvus migrans* mainly passed quite high. Second cy bird, 10 April 2008, Ashura Deh, Iran. © Magnus Ullman



Iranian desert you turn your eyes to the sky you will see large numbers of Steppe Buzzards heading northeast. Considering our relatively low number of Steppe Buzzards, our 9 Long-legged Buzzards *Buteo rufinus* on migration must be regarded as quite a good figure.

Interestingly, 14 Steppe Eagles, 2 Eastern Imperial Eagles *Aquila heliaca* and 3 Egyptian Vultures *Neophron percnopterus* had presumably flown over the Elburz mountains to follow the Caspian shore and Mian Kahle–Ashura Deh eastwards. Steppe Eagle is a numerous species that can be seen heading northeastwards almost anywhere in Iran (although the majority migrate earlier in spring). The 14 that passed us confirm that it is a very numerous bird.

Just like Goshawk and Hen Harrier (and unlike the other species in our study), Merlin *Falco columbarius* winters roughly to central Iran but not further south. Migrants were recorded more or less daily and the total was 20 birds, perhaps a surprisingly high figure considering that falcons are not as prone to follow migratory corridors as the larger raptors.

A 2nd cy Black-winged Kite *Elanus caeruleus* passed on 17 April (Plate 12). It is a very rare bird in Iran and has been reported only once before outside the southern and southwestern provinces (Abolghasem Khaleghizadeh pers comm). The observation indicates the great potential of Ashura Deh.

Apart from the one migrating Booted Eagle *Aquila pennata* another turned back westwards and was excluded from our figures. A Shikra *Accipiter badius* showed up on one occasion and was probably a bird breeding in the Mian Kahle area. We also saw non-migrating Peregrine Falcons *Falco peregrinus* on a few occasions and Eurasian Hobbies *Falco subbuteo* roughly every other day.

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**Plate 12.** A 2nd cy Black-winged Kite *Elanus caeruleus* headed east on 17 April 2008, Ashura Deh, Iran. © Magnus Ullman