

# Roosting harriers in the Aammiq Wetland

## Survey 2004-2005



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**A ROCHA**

*Together, Caring for God's creation*

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## Foreword

This report describes the results of 9 months counting harriers in the Aammig Wetland. Every time, it gave me a great joy to see the harriers coming from far away to the reed beds of the wetland. It gave me a good feeling to work on the conservation of this unique wetland. I will never forget the splendid views of the male Pallid Harrier chasing swallows over the reed bed, or the flock of 25 Marsh Harriers that suddenly, by an unknown reason, took off from the roosting site.

Hunters and day-trippers sometimes watched my work. They were often interested in my work. Some hunters rewarded me with a live show hunting white storks, right beside my watching point. I thought that they were shooting me (I still smell the burned gunpowder)! I enjoyed the farmers who offered me coffee while I was conducting the count and talked with me in unintelligible Arabic.

I also experienced difficult times. I remember the time I witnessed a female Hen Harrier being shot on her way to the roosting site. And in winter, the chilly wind sometimes blew me almost off the roof of the pump house.

I'd like to give thanks to Rich Prior, Colin Conroy and my Dutch friend Erik Koppelaar for helping me with the counts. Useful comments on my draft report were received from Colin Conroy.

# 1. Introduction

The Aammiq wetland has been designated as an important bird area of Lebanon. In recent years it was assessed by the A Rocha Lebanon staff that the marsh was attractive to harriers for roosting. It was even recorded that the endangered Pallid Harrier<sup>1</sup> used to roost in the marsh. As the marsh is not burned annually anymore as the managers used to do, it is expected that the marsh will become even more attractive for roosting harriers.

In the autumn of 2004 a survey was started to get an idea of the numbers of roosting harriers as well as the locations where they were roosting.

The aim of the survey was:

- To monitor the number of harriers, in particular the endangered Pallid Harrier, using the Aammiq Marsh as a roosting site during their migration and over wintering.
- To determine the habitat in the marsh which the harriers prefer for roosting, in order to conserve and manage these areas.

Another aim was to assess what kind of other bird species roost in the marsh.

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<sup>1</sup> The Pallid Harrier is a common passage migrant and rare winter visitor in the Aammiq Area. An early spring migrant, spring passage runs from early February to early April and fall passage runs from mid September to the beginning of December (The Birds of the Aammiq Area, A Rocha Lebanon). Its European breeding population is very small (as few as 310 pairs), and declined substantially between 1970–1990. It continued to decline in its Russian stronghold during 1990–2000, and declined overall at a rate that—on top of earlier declines—equates to a large decline (>20%) over two generations. As a consequence of this decline and its very small population, this globally Near Threatened species is provisionally evaluated as Endangered in Europe (Birdlife International, 2004)

## 2. Method

The counts were executed beginning in the third week of September 2004 and ending by mid-June 2005. The frequency of counts was in principle one time a week, but due to holidays and after mid-April when the numbers dropped drastically, counts were conducted once in the two weeks.

The harriers were counted in late afternoon/evening. Counts were started when the sun disappeared behind the Chouf Mountains. This time gave the best light on the marsh (in the back).

At the start of the count the main viewing point was the old pump house at the springs near the main road at the west side of the marsh. In December the roosting site of the Ring-tailed Harriers moved more to the west of the marsh. In order to conduct a good count, the viewing point was moved then to the pump house along the long avenue of trees roughly level with the East-West midpoint of the marsh. (See Appendix 1)

The species that were counted were:

Hen Harrier, Marsh Harrier, Pallid Harrier, Montagu's Harrier, 'Ring-tailed' Harrier. This last name was given to female and immature birds that couldn't be identified. They were in particular counted under bad light conditions and far distances. Most confusing is the difference between Montagu's and Pallid Harriers in the autumn, so most birds of this category can be assigned to one of these species.

Beside these species other species (especially those which also used the marsh as a roosting site) were recorded as well.

The areas where the harriers roosted were drawn on a map. At the roosting sites a simple habitat analysis was conducted. Within a roosting area the following marks were assessed:

- 1) Average height of vegetation
- 2) Depth of water in cm
- 3) Percent cover of vegetation in these categories (reed, sedge, grass, herb, bare earth, crop, other)
- 4) Species of plants

## 3 Results and discussion

### 3.1 Numbers of roosting harriers

For more details about the numbers of roosting harriers, see Appendix 2 & 3.

#### **Marsh Harrier (*Circus aeruginosus*)**

The numbers of roosting Marsh Harriers varied quite a lot. The species showed the highest number in the third week of February with 38 birds on 22 February. The number dropped down abruptly in week 15. In week 14, 29 harriers were counted and in week 15 only 3. This is a decrease of 90%! During the count in week 15, 3 Marsh Harriers flew over the roosting site but decided not to roost here and headed off in a southerly direction. This sudden decrease has probably been caused by the fact that by this time the reed stems had grown very strong so that the harriers were unable to make a place in the reed bed where they could roost. The harriers that flew away could probably find a roosting site in the wheat fields that provided them enough shelter in this time of year. Another reason may be that most of the Marsh Harriers had been migrated through. Three birds stayed in the marsh during the whole summer but although initially it seemed as though they might breed, no conclusive proof of this was seen.

Very conspicuous is that in week 14 38% of the number of Marsh Harriers were male as in the rest of the year this percentage fluctuated between the 8 and 15%.

#### **Hen Harrier (*Circus cyaneus*)**

This species has a high peak in the end of January/early February (maximum of 25 on 27 January). The numbers show fewer ups and downs than the Marsh Harrier.

The species was difficult to count as most birds arrived just before it was getting dark. They didn't show a small area where they roosted and most birds hunted in the marsh before they took off to their roosting site. Even when it was almost dark birds were seen hunting for roosting swallows and starlings. In general the harriers started to roost later when there were a lot of roosting starlings, swallows and corn buntings in the marsh.

#### **Pallid Harrier (*Circus macrourus*)**

This endangered species was seen in low numbers at the Aammiq wetland. At least one bird was present during the whole winter period. Small peaks are visible at the end of November/early December and at the end of March/early April, with a maximum of 4 on 31 March. These peaks correspond with the migration of the species.

In previous years (1999 and 2000) one bird also roosted in the marsh during the winter months (Colin Beale & Chris Naylor).

### **Montagu's Harrier (*Circus pygargus*)**

In the autumn up to 10 birds, mainly juveniles, were feeding in the fields in the northwest side of the marsh. Here the huge number of mice provided them with food. After their feeding, they moved to their roosting sites.

There is an obvious peak of this species in September. The last birds were seen in early November. Very conspicuous is the total absence in the spring!

Apparently, the species migrates very quickly through the Bekaa Valley in the spring.

### **'Ring-tailed' Harrier (*Circus cyaneus/pygargus/macrourus*)**

Small numbers (with a maximum of 6) of unidentified harriers were seen, mainly in the autumn.

## **3.2 Roosting sites**

Year-round there were at least 2 different roosting sites of Marsh Harriers. One was situated west of the irrigation pool in the central part of the marsh and a small one just east of the Irrigation Pool. The Montagu's, Pallid, Hen and Ring-tailed Harriers roosted separately from the Marsh Harriers. In the autumn they roosted in the rough, ungrazed pastures southwest of the marsh. In the winter and spring (after the rains) they roosted more in the central area, in the pastures north and south of the irrigation pool. See Appendix 1 for a map with the roosting sites.

## **3.3 Roosting habitats**

The harriers used each their own hare-like 'form' in the vegetation. The individual sites were at least 5 m. apart.

It was very obvious that the Montagu's, Pallid, Hen and Ring-tailed Harriers preferred the lower vegetation (up to 1 meter), while Marsh Harriers roosted in the high reed beds (up to 4 m.). In the table below are the results of the remarks of the roosting sites summarized:

	<b>Plant species</b>	<b>Cover of vegetation (%)</b>	<b>Average height of vegetation (cm)</b>	<b>Depth of water</b>
Montagu's/Pallid Hen/Ring-tailed Harrier	<i>Carex</i> sp. <i>Typha</i> sp. <i>Festuca arundinacea</i>	Sedge: 50 Reed: 5 Grass: 45	60	No water
Marsh Harrier	<i>Phragmites australis</i>	Reed : 100	400	> 10 cm.

### 3.4 Other roosting bird species

The Aammiq wetland is also important as a roosting site for other birds during their migration or over-wintering. The following bird species roost in the marsh.

Species	Highest number	Roosting period
Great Egret	20	Jan - early April
Cattle Egret	6	Dec - May
Night Heron	100	Mid April –October
Little Egret	5	April
Black Stork	200	March
White Stork	50	Mid March - Mid April
Starling	4000	Dec - March
Yellow wagtail	20	Sept - October
Corn Bunting	300	Aug – March
Barn Swallow	Spring: 2000	March - May
	Autumn: 5000	Sept - Nov
Sand Martin	Spring: 300	April - May
	Autumn: 50	September

The reed beds provide also a roosting site for other birds, like House Martins, Red-rumped Swallow, Red-throated Pipits, Meadow Pipits, Yellowhammers and White Wagtail. Other species, including Barn Owl (rare), Kestrel (regular), Common Buzzard (regular), Lesser Spotted Eagle (rare) and Long-legged Buzzard (regular), roost in the avenue of trees.

## 4. Conclusions & recommendations

The Aammiq wetland is very attractive for harriers for roosting. Up to 54 individual birds were seen especially in January and February. The wetland may be the only suitable area in the Bekaa Valley. It was often seen that birds came down from high altitudes from the Anti-Lebanon Mountains, suggesting that they had spent the daylight hours in Syria. Apparently the wetland acts as roosting site for birds from a huge area.

It is very valuable that the marsh provides roosting habitat for an endangered species like the Pallid Harrier, although the numbers are relatively low.

The table below gives a summary of the roosting harriers in the Aammiq wetland.

Species	Highest number (Date)	Roosting period
Marsh Harrier	38 (22-02-2005)	Mid August - mid April
Hen Harrier	25 (27-01-2005)	October – mid April
Montagu's Harrier	10 (22-9-2004)	September – Early November
Pallid Harrier	4 (31-3-2005)	September – mid April

### 4.1 Management

Hunting has effects on the number of roosting harriers. One female Hen Harrier was shot on her way to the roosting site. On other occasions it was seen that harriers dropped down in the reed bed very fast when there was a lot of hunting in the area. The problem with the roosting site near the Irrigation Pool is that it is very close to the Hajj-Chahine estate where hunting is allowed. It was seen that hunters stayed on the boundary between the hunting and non-hunting areas and that they were trying to shoot the harriers. A recommendation would be to place more "No Hunting" signs near the eastern borders of the Skaff estate (especially near the Irrigation Pool). It is also recommended that the Aammiq wardens patrol more frequently near the eastern borders of the estate especially in the period January & February, when hunting is severe.

At the moment there are plans to cut the reeds of the Aammiq wetland. For the roosting harriers it is very important that in the central part of the marsh enough suitable habitats will be available. When cutting the reeds there should be always left an area of at least 5 hectares of high reed bed. For the roosting of other

harrier species, it is important to maintain rough pastures which are not heavily grazed in the autumn and winter.

As the counts of other roosting bird species show, the reed beds are also very important for species like swallows, pipits and Corn Buntings during their migration and wintering. For these birds some areas of old reed should be left as well.

#### **4.2 Research**

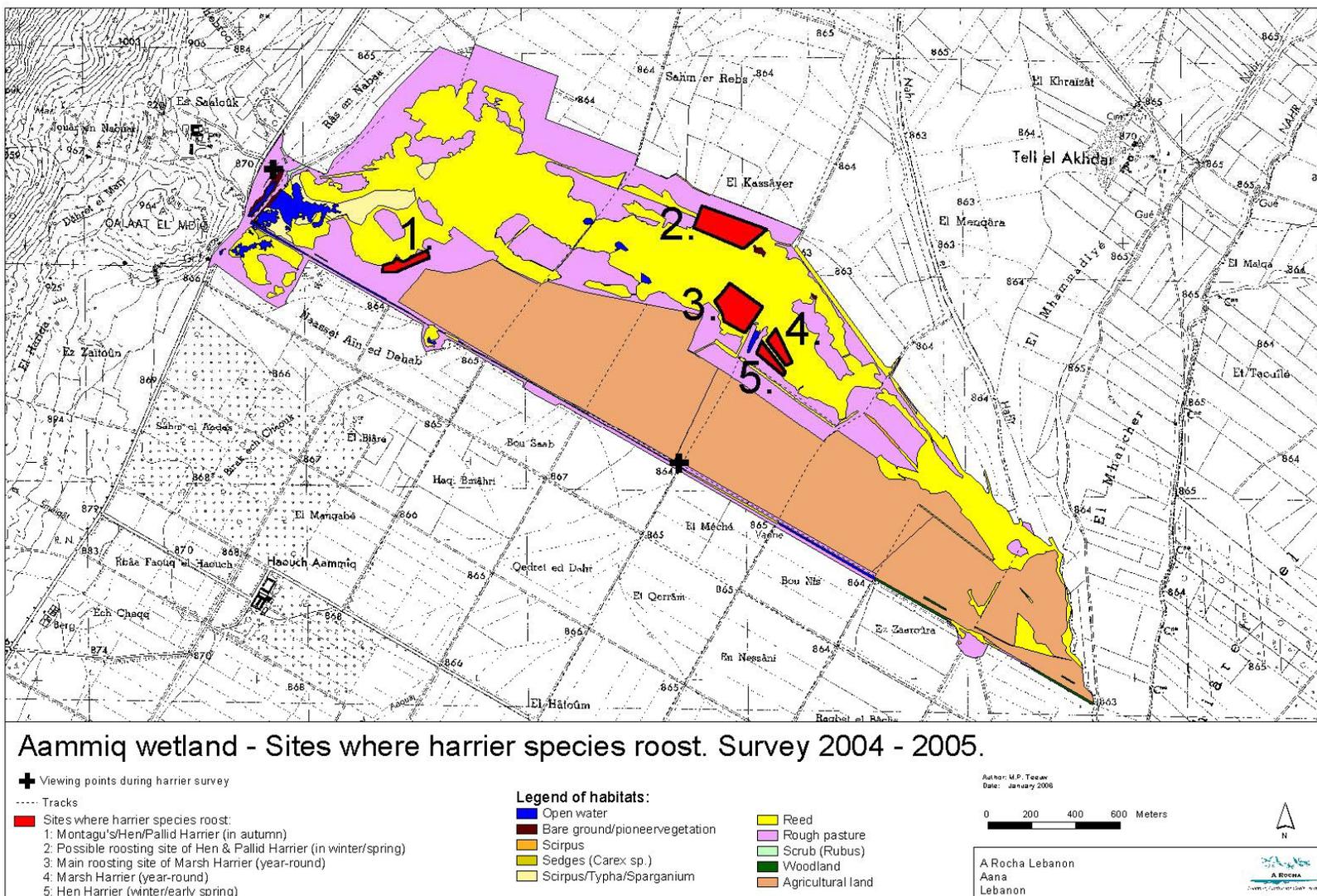
It is recommended to continue the survey. Especially when the reed beds will be cut or/and burned it is important to investigate the impacts of the management efforts. In the autumn the roosting site of Montagu's and Hen Harriers near the springs should be counted from the mountain Qalaat el Mdiq or from the roof of the old pumphouse. A combination with the single point count would be possibility. However, for the Marsh Harrier roosting site, it would be better to count from the roof of the pump house in the central part of the marsh.

## **5. Literature**

Birds of the Western Palearctic. Cramp & Simmons, 1980.

The birds of the Aammiq Area, 2<sup>nd</sup> Edition. A Rocha Lebanon, Lebanon.

## Appendix 1. Map of the Aammiq Wetland with the areas where harrier species roost.



## Appendix 2. Raw data sheet

Date	Week nr.	"Ring-tailed"					Marsh Harrier					Pallid Harrier					Montagu's Harrier					Hen Harrier					Totals							
		M	F	1W	J	U	TOT	M	F	1W	J	U	TOT	M	F	1W	J	U	TOT	M	F	1W	J	U	TOT									
15/09/2004	38										10	10						1	1	1					8	9						0	20	
22/09/2004	39										4	4								0						10	10						0	14
29/09/2004	40							2			13	15		1					1			2	1			3	1					1	20	
05/10/2004	41				1	1					16	16	1						1			1				1						0	19	
13/10/2004	42					0	1				11	12	1						1							0	1					1	14	
19/10/2004	43					0		2			7	9							0							0	2					2	11	
25/10/2004	44				1	1					12	12	1						1	2		1				3	1	2				3	20	
02/11/2004	45					0					10	10	1						1	1	1					2		9				9	22	
10/11/2004	46		1			1	1				10	11							0							0	3			7		10	22	
30/11/2004	49					0	1				13	14	1		1				2							0	2		6			8	24	
07/12/2004	50				6	6					8	8	2		1				3							0	8					8	25	
14/12/2004	51					0					8	8	1						1							0	1	12				13	22	
23/12/2004	52					0	3				12	15	1						1							0	4	7				11	27	
06/01/2005	1					0						15	1		1				2							0	2	7				9	26	
11/01/2005	2					0	1				14	15			1				1							0	2	9				11	27	
20/01/2005	3					0	1				12	13			1				1							0	3	12				15	29	
27/01/2005	4					0	1				28	29							0							0	3	22				25	54	
09/02/2005	6					0	2				18	20							0							0	2	14				16	36	
16/02/2005	7					0	4				23	27	1						1							0	2	13				15	43	
22/02/2005	8					0	3				35	38	1						1							0	4	11				15	54	
05/03/2005	9					0	1				21	22	1						1							0	1	9				10	33	
15/03/2005	11					0	4				22	26							0							0	1	11				12	38	
24/03/2005	12					1	1				17	18							0							0		5				5	24	
31/03/2005	13					0	4				19	23	2	2					4							0	2	2				4	31	
12/04/2005	15					0	11				18	29	1	1					2							0	2	1				3	34	
20/04/2005	16					0					3	3							0							0		1				1	4	
28/04/2005	17					0					0	0							0							0						0	0	
18/05/2005	20					0					0	0							0							0						0	0	
31/05/2005	22					0		2			2	2							0							0						0	2	
15/06/2005	24					0		1			1	1							0							0						0	1	

Date	Week nr.	"Ring-tailed"					Marsh Harrier					Pallid Harrier					Montagu's Harrier					Hen Harrier					Totals			
		M	F	1W	J	U	TOT	M	F	1W	J	U	TOT	M	F	1W	J	U	TOT	M	F	1W	J	U	TOT					
29/06/2005	26											3																		3
11/07/2005	28											3																		3
22/07/2005	30											3																		3
08/08/2005	32											3																		3
30/08/2005	35											12																		12

Appendix 3. Graph of counted roosting harriers in the period September 2004 – August 2005.

Roosting Harriers in the Aammiq Marsh  
2004/2005

