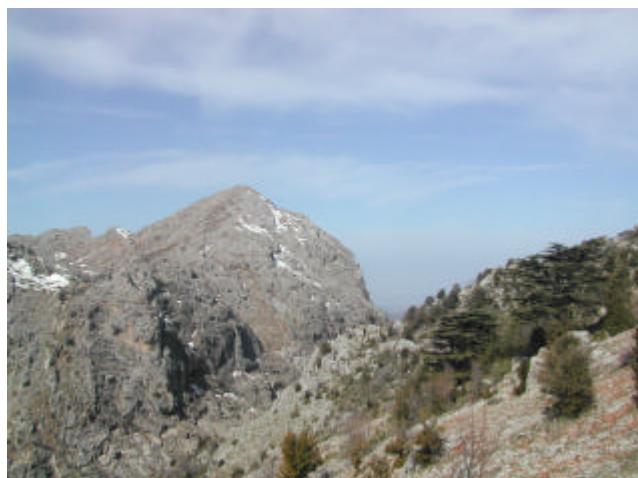
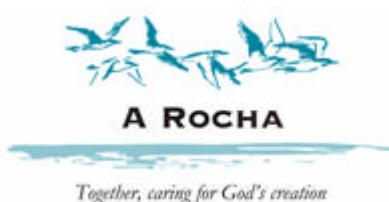


Final Report to the MAVA board on the Identification and Conservation of New “Important Bird Areas” in Lebanon Project – March 2005-February 2008



March 2008

A joint project by A Rocha Lebanon and the Society for the Protection of Nature in Lebanon, the national BirdLife partner.



Contents;

<i>Page</i>	
3	1 Introduction
4	2 Overview of the final year of the project
5-14	3 Fulfilment of Objectives and Outputs
14-16	4 The Hima System
16	5 Work still to be completed as part of the MAVA-funded project
17	6 Publicising the project to the wider scientific community
18	7 Conclusion
18	8 References
	Appendix 1 Checklist of the birds of Lebanon
	Appendix 2 Data
	Appendix 3 Final IBA year proposal to MAVA – November 2006
	Appendix 4 Site descriptions
	Appendix 5 IBA and Hima Pamphlets produced during the project
	Appendix 6 IBA monitoring guidelines and forms
	Appendix 7 <i>Conserving Important Bird Areas and Empowering Local People in the Middle East; The traditional Approach of Hima</i>
	Appendix 8 <i>Al Hima – A Way of Life</i>
	Appendix 9 Interim reports for 1st & 2nd years of project – Main text only

1 Introduction

This document is the final report for the MAVA board of the *Identification and Conservation of New “Important Bird Areas” in Lebanon Project*, which has been funded by MAVA and carried out jointly by A Rocha Lebanon and the Society for the Protection of Nature in Lebanon (SPNL), the latter being the Lebanese partner organisation for BirdLife International. The report covers the entire period of the project - March 2005 to February 2008. The activities carried out in the first two years of the project have already been reported on in detail in the interim reports for those years and so will only be described here in brief. The main text of these reports, plus the raw data and the Site Description for the first two years of the project, are included in Appendix 9 of this report. The activities carried out in the final year of the project (March 2007 to February 2008) will be described in detail here. In addition, there are some activities which are part of the project, which cannot be completed until a decision is announced by BirdLife International about which of the final batch of sites will be granted the status of Important Bird Area. These activities will be reported on when they are completed.

1.1 The scope of this Report

The *Identification and Conservation of New “Important Bird Areas” in Lebanon Project* had two objectives for each of which there were six outputs which the project would aim at achieving.

These are:

Objective 1: Identify new IBAs

Output 1.1 - Produce a unified bird checklist for Lebanon

Output 1.2 – Create the IBA database and input current data

Output 1.3 – Organise launching seminar, inviting all interested parties to participate in the IBA programme

Output 1.4 – Organise two 2-week intensive research surveys with visiting ornithologists per year to coincide with peak migration

Output 1.5 – Survey each site for birds at least six times throughout each year

Output 1.6 – Match data to BirdLife IBA criteria and declare IBAs

Objective 2: Conservation (Protection) of IBAs

Output 2.1 – Survey each site for its habitats, land uses, non-avian biodiversity and threats

Output 2.2 – Draw up a site management statement for each site

Output 2.3 – Identify small teams (up to ten individuals) to form the site support group for each new IBA

Output 2.4 – Train key members (two per site) of site support group in basic bird identification skills, bird monitoring, site management and conservation advocacy

Output 2.5 – Work with the site support group and local council to form a management committee for the management of the site.

Output 2.6 – With each site support group design and implement monitoring schemes to identify new threats and determine the success of conservation measures

For this project the sites were divided into three groups, with a different group being surveyed each year. After each year’s fieldwork was carried out, the data was sent to the BirdLife International Secretariat, in Cambridge, UK, with recommendations about which sites A Rocha Lebanon and SPNL thought should be designated as IBAs, based on the results of the fieldwork and supported by any other recent data available. Once BirdLife had made its decision, the second phase of the project could then commence for the successful sites.

2 Overview of the final year of the project

Following the devastation of the Summer War in 2006, 2007 started fairly quietly for Lebanon and the fieldwork for the final year of the IBA project was able to get underway without any problems. This changed in May, when a 3-month long siege began at the Nahr el-Barrad refugee camp in Tripoli, which led to a heightened security situation in the whole country and made further visits to some of our sites difficult for most of the Summer.

Despite these difficulties, the project did not have to be suspended at any point, as happened in 2006, and all the necessary fieldwork and community work was able to be completed on schedule.

The activities carried out in the final year of the project can be summarised thus:-

- i) **Four** sites have been proposed for designation as a single IBA and are currently under consideration by BirdLife International. These sites are all adjacent to each other and it was considered to be better to treat them as one area when recommending them to BirdLife.
- ii) **Two** further sites, both sites that were carried over from the second year of the project, have been recommended to BirdLife International for designation as Middle-Eastern IBAs. This category is given to sites that do not satisfy the criteria for global Important Bird Areas but which nevertheless are considered important in a regional context and which satisfy the criteria for Middle-Eastern IBAs (see section 3.1.6 below). A decision is awaited from BirdLife on this.
- iii) Across the country 9 sites have been thoroughly surveyed for avian biodiversity importance (minimum six visits per site during the year running from March 2007 - February 2008). A further 4 sites were surveyed only in the Autumn, having been carried over from the second year of the project due to interruption of the fieldwork by the Summer War of 2006. This has generated a huge amount of data of great importance to the conservation efforts at the sites and to the building up a national repository of base-line data for further studies.
- iv) The two sites (Beirut River Valley and Ras Baalbek) that were recommended for IBA status at the end of the second year of the project, have been designated as Important Bird Areas by BirdLife International.
- iii) The training session for Site Support Groups from the 2 newly declared IBAs was held on the 27th and 28th of October 2007, with 11 people attending from the two sites. They learned basic bird identification skills, and received training in site monitoring and conservation.
- iv) Site Management Committees are in place at both of these new IBAs.
- v) Monitoring programmes have been designed for the two new IBA sites.

3 Fulfilment of Objectives and Outputs

3.1 Objective 1: Identify new IBAs

In the original project proposal this objective is stated thus:

“To identify new IBAs by visiting prospective sites and surveying them for their avifauna, working according to BirdLife International protocols”. This has been carried out in each of the three years between March 2005 and February 2008. Over the whole project 31 sites have been surveyed: 12 in the 1st year, 10 in the 2nd year and 9 in the 3rd year. Of the 2nd year’s sites, four were carried over into the final year so that the Autumn season fieldwork could be completed.

Subsections 3.1.1-3.1.6, below detail how the six outputs of Objective 1 were met in (a) the whole project period and (b) in the year from March 2007 to February 2008. In cases where the output was completed before the final year of the project, nothing is written under (b)

3.1.1 Output 1.1 - Produce a unified bird checklist for Lebanon

a) This output was completed in the first year of the project, and reported on in the interim report for that year. A new checklist of all 376 bird species known to have occurred in Lebanon, was produced, with names in English, French and Arabic as well as the scientific (Latin) names. Although the list was included with the first year’s report, for the sake of completeness, it is attached here in Appendix 1.

3.1.2 Output 1.2 - Create the IBA database and input current data

a) BirdLife International’s *World Birds Database* is being used for the storage of all the data generated by the project, as well as data from other projects and general birdwatching activities within Lebanon. The data from all three years of the project are currently being entered into the database. The database is designed so that the data can be input on-line by BirdLife staff and partners, who have passwords allowing them access. The intention is that eventually, members of the public will be able to view the data on-line. However, the database is still at the data-entry phase and is not yet accessible to the general public.

The datasets for the first two years of the project, which were included in the interim reports for those years, are repeated in this final report and can be found in Appendix 2.

b) The data from the final year of the project are shown in Microsoft Excel spreadsheets and can be found in Appendix 2 along with the data from the first 2 years. Each year’s data is given in a separate Excel file, with a different worksheet for each site. For the sites which were carried over into the final year so that the autumn fieldwork could be completed (Bentael, Ramlieh, Jisr el Qadi and Lower Damour River), the entire dataset (from 2006 and 2007) is included in the file entitled “Data – year 3.xls”

3.1.3 Output 1.3 - Organise launching seminar, inviting all interested parties to participate in the IBA programme

a) For reasons described in the Interim report for year 1, the project was officially launched at two separate events, the first stage being at the AEWA Festival at the K'far Zabad wetland on the 9th of April 2005, while the second stage took place at the Ministry of the Environment, Beirut on the 26th July 2005.

3.1.4 Output 1.4 - Organise two 2-week intensive research surveys with visiting ornithologists per year to coincide with peak migration

a) In the first two years of the project groups of visiting ornithologists came to Lebanon each Spring for two weeks to assist with the fieldwork during the peak migration period. This was a great help in both years and allowed us to ensure that good coverage was given to all of the sites being surveyed by A Rocha Lebanon, during the time when the biggest numbers of soaring birds were passing through. In both years however for different reasons no visiting ornithologists came in the Autumn. In the first year this was because continuing political unrest made potential visitors nervous about coming to Lebanon. In the second year the war in July and August resulted in the entire A Rocha Lebanon team being evacuated and we did not return until November, by which time the Autumn migration period was over.

b) Unfortunately, ongoing political unrest in Lebanon and the wider region in 2007 led A Rocha Lebanon's governing board to make the decision that the visitor and volunteer programs should remain closed until the situation had improved. Consequently, no visitors from outside Lebanon were able to come in either Spring or Autumn, to assist with the field work. Nevertheless, the A Rocha and SPNL teams, supplemented by local volunteers, ensured that the migration periods were intensively studied at all sites (see Appendix 2)

3.1.5 Output 1.5 - Survey each site for birds at least six times throughout the year

- a)** During the three years of the main project period, from March 2005 to February 2008, 31 sites have been surveyed as potential Important Bird Areas – 12 in the first year, 10 in the second year (of which 6 were not surveyed in the Autumn due to the after-effects of the Summer War), and 9 in the third year (see below). In addition 4 of the second year's sites were surveyed in the Autumn of the third year. Several sites which were originally chosen for inclusion in the project were not surveyed because of local conditions regarding security. This was detailed in the proposal to MAVA entitled *The final year of the “Identification and Conservation of New Important Bird Areas in Lebanon” Project, following the war of July & August 2006* (see Appendix 3)
- b)** In the March 2007–February 2008 time period 9 new sites were surveyed as potential Important Bird Areas. These were Fneideq, Mechmech, Qammouaa, Wadi Jouhanam, Jabal Moussa, Jabal Aalmat, Nahr Ibrahim (aka Adonis River), Zibdeen and the Qadisha Valley

In addition four of the sites from the second year of the project, Bentael, Ramlieh, Jisr el Qadi and the Lower Damour River, were visited in the Autumn season, as visits were not possible to these sites in Autumn 2007.

The raw data from all of the surveys is given in Appendix 2, in the Excel file entitled “Data - year 3.xls” and summarised in the sections on the individual sites in Appendix 4, in the file entitled “Year 3 – Site Description.doc”.

3.1.6 Output 1.6 - Match data to BirdLife IBA criteria and declare IBAs

a) Although the process preceding the declaration of new IBAs as a result of this project, was detailed in the interim report on the first year of the project, for the sake of clarity and completeness, that section is repeated here followed by the BirdLife IBA criteria which apply to sites in the Middle East.

“The final decision on whether sites in Lebanon become IBAs or not rests with BirdLife International’s Middle East office in Amman. They need to be satisfied, based on the data which are generated by A Rocha Lebanon and SPNL during this joint project, that a particular site does indeed match the criteria which have been decided for IBAs in the Middle East. However, when the data is submitted to BirdLife, sites that appear to us to meet the criteria, are recommended for designation as IBAs, and details given about which criteria they meet. In some cases this might be based on an extrapolation of the actual data. This is particularly relevant for sites where the main interest is soaring birds on migration, where many species migrate over a period of several weeks, but visits are only made on a relatively small number of days during that period.”

A: Important Bird Areas - Global importance

A1. Species of global conservation concern

The site regularly holds significant numbers of a globally threatened species, or other species of global conservation concern.

A2. Restricted-range species

The site is known or thought to hold a significant component of the restricted-range species whose breeding distributions define an Endemic Bird Area (EBA) or Secondary Area (SA).

A3. Biome-restricted species

The site is known or thought to hold a significant assemblage of the species whose breeding distributions are largely or wholly confined to one biome.

A4. Congregations

- i. The site is known or thought to hold, on a regular basis, = 1% of a biogeographic population of a congregatory waterbird species.
- ii. The site is known or thought to hold, on a regular basis, = 1% of the global population of a congregatory seabird or terrestrial species.
- iii. The site is known or thought to hold, on a regular basis, = 20,000 waterbirds or = 10,000 pairs of seabird of one or more species.
- iv. The site is known or thought to be a ‘bottleneck’ site where at least 20,000 storks (Ciconiidae), raptors (Accipitriformes and Falconiformes) or cranes (Gruidae) regularly pass during spring or autumn migration.

B: Important Bird Areas - Middle Eastern importance

B1: Regionally important congregations

The site may qualify on any one of the three criteria listed below:

- i. The site is known or thought to hold = 1% of a flyway or other distinct population of a waterbird species.
- ii. The site is known or thought to hold = 1% of a distinct population of a seabird species.
- iv. The site is a ‘bottleneck’ site where over 5,000 storks, or over 3,000 raptors or cranes regularly pass on spring or autumn migration.

B2: Species with an unfavourable conservation status in the Middle East

The site is one of the five most important sites in the country/territory for a species with an unfavourable conservation status in the Middle East (threatened or declining throughout all or part of their range in the region) and for which the site-protection approach is thought to be appropriate.

B3: Species with a favourable conservation status but concentrated in the Middle East

The site is one of the five most important sites in the country/territory for a species with a favourable conservation status in the Middle East but with its global range concentrated in the Middle East, and for which the site-protection approach is thought to be appropriate.

In the first two years of the project, all data collected were sent to BirdLife International along with our recommendations as to which sites should be designated as IBAs. In the first year, five sites were recommended, namely Aanjar/ K'far Zabad, Lake Qaraoun, Riim/ Sannine, Tannourine Cedars and Ebel is-Saqi. In the second year, two sites were recommended, namely Ras Baalbek and Beirut River Valley. In all cases our recommendations were upheld by BirdLife International and the sites were declared as IBAs of Global Importance.

b) Similarly, after the completion of the fieldwork year for the final year of the project, all data from this year has been sent to BirdLife in Cambridge. Of the 9 new sites and 4 carried-over sites surveyed in this year 4 have been recommended, by A Rocha Lebanon and SPNL, to be designated as a single IBA, to be known as the Upper Mountains of Akkar-Donnieh IBA. In addition 2 sites which didn't meet the criteria for designation as IBAs of Global Importance (criteria A1-4, above), have been recommended as IBAs of Middle-Eastern Importance (criteria B1-3, above).

The following tables (Tables 3.1, 3.2 3.3 & 3.4) report on Output 1.5, 1.6, and 2.1. They show which sites were surveyed, how many visits were made and which of the two organisations (of A Rocha Lebanon and SPNL) was primarily responsible for surveying the sites. The sites are grouped in a way which summarises recommendations which have been forwarded to BirdLife International for declaration of IBA status. The sites are put into three groups:

- i) Sites that meet the criteria for IBAs of Global Importance (and which are currently being considered BirdLife International.)
- ii) Sites that meet the criteria for IBAs of Middle-Eastern Importance (and which are currently being considered BirdLife International.)
- iii).Sites not meeting IBA criteria using current data but showing promise that with more study, they may qualify as IBAs.
- iv) Sites that do not meet the IBA criteria and to which no further visits are planned.

Table 3.1 Sites meeting IBA Criteria for Global Importance

Site number and name	IBA criteria met	Number of times visited during the reporting period	Organisation responsible
1-4. Fneideq, Mechmech, Qammouaa & Wadi Jouhanam – amalgamated as Upper Mountains of Akkar-Donnieh	A1. A2, A3, A4iv	43 over the 4 sites (10, 11,12 & 10 respectively)	SPNL

Table 3.2 Sites meeting IBA Criteria for Middle-eastern Importance

Site number and name	IBA Middle-eastern criteria met	Number of times visited during the project	Organisation responsible
5. Bentael	B1iv	7 (4 in 2 nd year & 3 in 3 rd year of project)	A Rocha (SPNL staff visited twice)
6. Ramlieh	B1iv	12 (5 in 2 nd year & 7 in 3 rd year of project)	A Rocha

Table 3.3 Sites not meeting IBA criteria but needing more study

Site number and name	Number of times visited during the reporting period	Organisation responsible
7. Jabal Moussa	17	A Rocha

Table 3.4 Sites not meeting IBA criteria to which no future visits are planned

Site number and name	Number of times visited during the reporting period	Organisation responsible
8. Jabal Aalmat	9	A Rocha
9. Nahr Ibrahim	10	A Rocha
10. Zibdeen	6	A Rocha (SPNL staff visited twice)
11. Qadisha Valley	6	A Rocha (SPNL staff visited twice)
12. Jisr el Qadi	7 (4 in 2 nd year & 3 in 3 rd year of project)	A Rocha
13. Lower Damour River	9 (4 in 2 nd year & 5 in 3 rd year of project)	A Rocha

3.2 Objective 2: Conservation (Protection) of IBAs

Subsections 3.2.1-3.2.6, below detail how the six outputs of Objective 2 were met in (a) the whole project period and (b) in the year from March 2007 to February 2008. In cases where the output was completed before the final year of the project, nothing is written under (b)

3.2.1 Output 2.1 - Survey each site for its habitats, land uses, non-avian biodiversity and threats

- a)** This was carried out for all the sites visited in all three years of the project. The assessment was done at the same time as the main bird survey visits. The habitat and land-use classes used were those recommended by BirdLife International.
The data is shown in the individual site accounts (see Appendix 4).
- b)** The habitat, land-use, non-avian biodiversity and threat data for the final year of the project can be found in Appendix 4 of this report.

3.2.2 Output 2.2 - Draw up a site management statement for each site

- a)** For each site surveyed during the project, a detailed report has been written, which includes:
 - i) General description
 - ii) Dates of visits
 - iii) All bird records (in separate appendix as Microsoft Excel spreadsheets)

In addition for sites recommended for IBA status:

- iv) Supporting notes for recommendation of IBA status
- v) Site Management Statement (see section 3.2.2 of the first year's report for a detailed description of what a Site Management Statement consists of).
- vi) Map (or aerial photograph) of the proposed IBA

For sites surveyed in the first two years of the project, these reports can be found in Appendix 4 of the interim report for the relevant year.

- b)** The Site Descriptions, Supporting Notes, Site Management Statement, and Map (or aerial photograph), for sites surveyed in the final year of the project can be found in Appendix 4 of this report.

All the bird records for the final year can be found in Appendix 2

3.2.3 Output 2.3 – Identify small teams (up to ten individuals) to form the Site Support Group for each new IBA

- a)** In each year of the project, after the decision had been made about which sites to recommend for designation of IBAs, small groups were identified in each new candidate-IBA, to form a Site Support Group. The names of the members of these groups for the 5 sites recommended in the first year of the project and for the 2 sites recommended in the second year, can be found in the interim reports for those years (see Appendix 9).
- b)** For the single new candidate-IBA being recommended after the final year's fieldwork, plus the two new candidate-Middle-Eastern IBAs, the following key

people have been identified and have agreed to act as the coordinators and facilitators of the Site Support Groups and to recruit more people into the group.

Site Support Groups (SSGs) and initial Contacts for Proposed IBAs from the second year of the project.

Site 1– Upper Mountains of Akkar-Donnieh

- 1- Isabelle Peillen
- 2- Nadim Zakhia

Site 2 – Bentael Reserved Area

- 1- Marie-Therese Seif
- 2- George Farah

Site 2 – Ramlieh

- 1- Sawsan bou Fakhreddin
- 2- Hicham Salman

3.2.4 Output 2.4 – Train key members (two per site) of site support group in basic bird identification skills, bird monitoring, site management and conservation advocacy

a) The following three sections (on Outputs 2.4, 2.5 & 2.6) refer only to sites that have already been designated as IBAs or Middle-Eastern IBAs by BirdLife International, and so the sites which were recommended from the final year of the project, but which are still being considered by BirdLife International, are not covered in this section of the report. If and when the sites are accepted by BirdLife International as IBAs or Middle-Eastern IBAs, and these three outputs have been completed, they will be reported on in a supplementary report to the MAVA Board.

In the first year of the project, five sites were recommended as new IBAs and were subsequently granted IBA status by BirdLife. During the second year of the project, representatives from these five sites, Aanjar/ K'far Zabad, Ebel is-Saqi, Lake Qaraoun, Tannourine and Riim-Sannine, were given training in bird identification, conservation, and site assessment and management. As part of the training process, monitoring programs for the sites were designed and Site Management Committees chosen for three of the five sites. The whole process is described in detail, including the reasons why two of the sites do not yet have management committees, in the interim report for the second year of the project.

b) The field assessment of the second year of the project (March 2006-February 2007) resulted in the declaration of two new IBA sites; namely: Beirut River Valley and Ras Baalbek. During the field assessments of these sites, contacts have been established at each of the sites (included in the interim report for the second year of the project). Upon the official declaration of the new IBAs by BirdLife International, these people were contacted asking them to nominate representatives from their sites to attend the workshop organized by the project.

Since Beirut River valley is a large site, it was decided to organize the workshop at the Karma Restaurant in Daher Al-Wahash area, in the village of Aaraya which is almost in the middle of the declared IBA site. A two day workshop was organized on the weekend of 27 & 28 October 2007, which included an introduction to birds, their

importance, bird ecology and bird identification skills in the first day. The second day covered an explanation of the IBA programme, international criteria, conservation issues, the Hima approach to community-based conservation and a comparison between the Hima and Nature Reserves approaches for conservation. Furthermore, the IBA monitoring procedure was clarified to the participants to facilitate initiatives at their sites. The workshop techniques covered both theoretical presentations coupled with bird watching application in the first day, and exercises on IBA assessment, stakeholder analysis, and IBA monitoring on the second day.

Eleven people were nominated to attend the workshop (2 representing Ras Baalbek, and 9 from Beirut River Valley), but actually the workshop was attended by nine. Several publications were distributed to the participants including a bird identification training manual, the Arabic translation of *The Field Guide to the Birds of the Middle East* (Porter et al. 2006), the IBA pamphlet, and the Hima pamphlet (see Appendix 5 (paper only) for copies of these two pamphlets). The general feedback from the participants was highly positive and they were enthusiastic for future cooperation and follow-up.

The delegates who attended all or part of the workshop were as follows, listed by the sites they represented:-

Ras Baalbek: Yousef Ishber Antoun
Antoun Chaaban

Beirut River Valley: Nizar Faraj - Abadieh
Nidal Abou Hamzeh - Abadieh
Naja Abou el Hossem - Bhanmdoun
Ala'a Helal - Kurneiyel
Cristelle Rizk - Loueizeh-Baabda
Andrea Becharra - Hammana
Walid Abou Habib - Hammana

NB- Beirut River Valley is a large site which falls under the authority of several villages. The names of the attendants' villages are given after their names.

3.2.5 Output 2.5 – Work with the site support group and local council to form a management committee for the management of the site.

- a)** The names of the members of the Management Committees for the first 5 IBAs declared in after the first year's field assessments, are given in Section 3.2.5 of the Interim Report for the second year of the project (see Appendix 9). As stated in that report, it was only possible to establish management committees in 3 of the 5 sites. Although communications are ongoing with the 2 remaining sites, it has still not been possible to establish functioning management committees.
- b)** Following the second year's field assessments, 2 further sites, Ras Baalbek and Beirut River Valley, were declared as IBAs.

The following individuals have agreed to form the core of the Site Management Committees for the two sites.

Ras Baalbek: Antoun Chaaban
Yousef Ishber Antoun

Beirut River Valley: Khalid Najjar
Akram Abou el Hossem
Andre Becharra
Najah Khairallah
Naji Khairallah
Nabil Khairallah

3.2.6 Output 2.6 – With each site support group design and implement monitoring schemes to identify new threats and determine the success of conservation measures

- a) See the interim report for the second year of the project (see Appendix 9) for an account of how this process was carried out for Aanjar/ K'far Zabad, Ebel is-Saqi, Lake Qaraaoun, Tannourine and Riim-Sannine.
- b) The workshop described in section 3.2.4, above, covered the issue of monitoring on the second day, allocating a whole session to IBA monitoring. The morning session clarified the process of field assessment based on the IBA assessment sheet adopted by BirdLife International. This assessment sheet includes in addition to the general description of the site, the reason for its declaration as an IBA, and the identification of main threats on the site (see Appendix 6 for the guidelines on IBA monitoring and the Monitoring Forms in English and Arabic). The session included an exercise filling the information on the assessment sheet dividing the participants on site basis.
The monitoring session included a power point presentation clarifying the process of monitoring, selection of indicators, and the reason for monitoring the sites. This process was emphasized through an exercise – group work using the IBA monitoring sheet-after translating it to Arabic (see Appendix 6). This session during the workshop helped in setting the monitoring scheme for each site. Follow up will be done with the sites through field visits.

Site Specific Monitoring Issues

BirdLife International's IBA monitoring scheme is designed to fit all sites and as such forms the basis of the monitoring programme for each of the sites following locally appropriate amendments. The most important of these are outlined here.

- 1) Ras Baalbek (*SPNL/ A Rocha to support*) – The main importance of this site is for specialist breeding birds of desert habitats. The main conservation issues are the maintenance of the habitat for these species, and the disturbance and destruction caused by hunting. In monitoring the site it is important to know if the area of suitable habitat is shrinking, growing or remaining unchanged, and it is also important to monitor the level of hunting at different times of the year so that appropriate actions can be taken.
- 2) Beirut River Valley (*SPNL to support*) – the main importance of this site, and the reason for its declaration as an IBA, is the very large numbers of soaring birds which pass through it in Spring and Autumn. The biggest threat to these is hunting, both with guns and with nets and it will be important to monitor the extent of the problem and to identify the areas where hunting is most prevalent, so that anti-hunting activities can be targeted where they are most needed.

Another significant threat, identified by the delegates at the training course, is uncontrolled fire, resulting in loss of forest and scrub which are important roosting habitats for soaring birds.

4 The Hima System

In parallel with the MAVA funded IBA research programme, SPNL has been involved with an innovative community-based conservation initiative, called Hima, which is outlined here.

Ever since its foundation in 1986, the Society for the Protection of Nature in Lebanon-SPNL (www.spnlb.org) has advocated the establishment of protected areas. Together with the Lebanese Ministry of Environment, they have initiated projects for protected areas within Lebanon. After twenty years of experience working in Nature Reserves with government agencies and due to the increased concern at local, national and international levels for co-management of natural resources, SPNL is now reviving and advocating the adoption of the Hima system which has been prevalent in the Arabic region for around 1500 years.

The Hima is a traditional approach for protected area management which involves the sustainable use of natural resources by and for the local communities surrounding the Hima. This indirectly benefits the conservation of biodiversity together with the natural and cultural heritage of the area. Historically, governance of Himas was initiated and handled solely by tribal chiefs in Arabia. Later, it was handed over to religious leaders to ensure benefits to the underprivileged people in communities and within tribes. In countries of the Near East such as Lebanon, this was later transferred to municipalities and other democratically elected bodies. This transfer ensured equity and the fair use of resources, whilst sustaining the natural resources of the Hima. During the last thirty to fifty years, most countries in the Middle East have neglected the Hima system, and the region has witnessed the advocacy and adoption of other categories of Protected Areas managed by governmental agencies.

SPNL has been working on the Important Bird Areas-IBA programme since 1994 and this has resulted in four sites being identified by SPNL/BirdLife International as IBAs, namely; Ammiq Wetlands, Chouf Cedar Nature Reserve, Ehden Forest Nature Reserve, and Palm Islands Nature Reserves. More recent research by SPNL and A Rocha-Lebanon through the MAVA funded research project has identified seven new sites (Hima Ebel es- Saqi, Aanjar/K'far Zabad, Tannourine Nature Reserve, Qaroun Lake, Riim/ Sannine, Beirut River Valley and Ras Baalbek), with a further three (Upper Mountains of Akkar-Donnieh, Bentael, and Ramlieh) awaiting a decision from BirdLife International. The ultimate aim of the IBA programme is the conservation of these sites. Some of these could be best preserved through community based conservation and the Hima system.

The limited ownership of the local communities within the current centralized system of protected areas has resulted in limited benefit-sharing with local community groups. SPNL therefore, is hoping to gain stronger support for the Hima practice as a viable and sustainable complementary approach to nationally designated protected areas. The increased involvement of local communities and the benefits derived from protection will ultimately result in improved status of the natural resources themselves.

The overall goal of the Hima revival is to mesh traditional practices with recent conservation science as a way to reach sustainable development for the conservation of the declared IBAs. SPNL's initiative in reviving the Hima approach started in 2004 with the discovery of the word "Hima" on old maps for Ebel es-Saqi. Since 2004, SPNL has re-established three Himas in collaboration with municipalities, in three key biodiversity areas; namely Ebel es-Saqi in South

Lebanon, Kfar Zabad wetland in the Bekaa region (part of the Aanjar/ K'far Zabad IBA), and Qoleileh Marine Hima in South Lebanon .

Another example of the Hima system is the Aammiq Marsh (Lebanon's most significant remaining natural freshwater site and one of the few in the Middle East). This major stop-over site for migrating birds was under severe threat. Since 1996, A Rocha Lebanon (<http://en.arocha.org/lebanon/>) has been initiating conservation programmes with the private landowners, local communities and religious groups in the West Bekaa. Additionally, it has worked nationally to engage religious communities in nature conservation and sustainable resource management. During the same period, work with the landowners of the Aammiq Marsh using Hima principles has led to the protection and restoration of this internationally important wetland. This is a unique project in Lebanon and has resulted in the cooperation between private landowners and an N.G.O. which has created the country's first private reserve which is now a designated Ramsar site.

Why Hima?

The Hima provides an approach through which conservation can be linked to the community. IBAs are identified on the basis of biology and geography. Designation as an IBA does not mean that a site is, or should be, protected under any formal mechanism, neither does the list of IBAs in itself constitute a conservation plan.

In Lebanon, it will not be feasible or desirable to designate every IBA as a formal Protected Area. Resource limitation, conflicting land ownership and high opportunity costs in productive landscapes often make this difficult. Also, formal Protected Area designation may not necessarily be the most effective approach to site-based protection, especially where many people live in and/or use an IBA. Indeed, in some circumstances, formal Protected Area designation could be counter-productive to conservation objectives, particularly where current Protected Area regulations (i.e. Nature Reserve) restricts traditional land and natural resource use practices that are compatible with or contribute to the biological value of a site.

In such circumstances, alternative approaches for site-based protection of IBAs are needed. These could include community managed conservation areas, or private reserves, through voluntary agreements with municipalities, land owners, tribes and religious groups. They could be classified as Himas, thus complementing the Nature Reserve Category.

In many cases, the Hima approach may be cost-effective and help to engage support from sources not used or available to Nature Reserves. Hima status may also provide greater opportunities for sustainable human use of natural resources, and therefore, make a greater contribution to poverty alleviation for people whose use of natural resources forms a critical component of their livelihood strategies.

Conservation through local community initiatives has proved up till now to be more resilient than centralized management. But, in order to ensure sustainable management of these key biodiversity sites and the sustainability of community based management, this demands further investment in capacity building, infrastructure development, awareness on best practices (for farmers, fishermen etc.) and linkage with poverty alleviation initiatives.

The revival of the Hima approach, led by SPNL, was discussed during the BirdLife regional meeting in Amman in 2005, and adopted as an approach for the conservation of IBAs. The traditional Hima approach was further discussed in 2006, and elaborated into a strategy through, the regional BirdLife partnership meeting in Yemen and conferences and workshops in Syria and Sharjah (see Appendix 7 (paper only) for the booklet *Conserving Important Bird Areas and Empowering Local People in the Middle East; The traditional Approach of Hima*).

Extraordinary partnership between SPNL, BirdLife International, IUCN, Swiss Agency for Development and Cooperation (SDC), Ministry of Environment in Lebanon, Royal Society for the Conservation of Nature and Hanns Zeidel Foundation has developed which led to the realization of a regional workshop in Lebanon during March 2007. This regional workshop, attended by regional and international experts, aimed at identifying the linkages between the Hima approach, nature conservation and poverty alleviation in the 21st century, and the development of a road map for the Hima approach (see Appendix 8 (paper only) for the booklet *Al-Hima; A way of life*). Achievements in Lebanon were presented and discussed during the IUCN WESCANA regional meeting in Iran during May 2007.

Furthermore, national efforts by SPNL has led to the adoption of the Hima approach by the government as a way for conservation, and the inclusion of the approach in the national draft decree for protected area management.

5 Work still to be completed as part of the MAVA-funded project

5.1 Training, monitoring and formation of Management Committees

Because of the unavoidable time delay between the recommendation of sites and their declaration or rejection as IBA's by BirdLife International, certain aspects of the project concerning newly declared IBAs could not be completed before the submission of this report to MAVA.

The outputs affected by this are Outputs 2.4, 2.5 & 2.6 from the original proposal:-

Output 2.4 – Train key members (two per site) of site support group in basic bird identification skills, bird monitoring, site management and conservation advocacy

Output 2.5 – Work with the site support group and local council to form a management committee for the management of the site

Output 2.6 – With each site support group design and implement monitoring schemes to identify new threats and determine the success of conservation measures

These will be carried out, for the final year's sites, once notification has been received from BirdLife International about which sites will be granted IBA status. They will then be reported on in a separate, supplementary report to MAVA

5.2 Summary leaflet/ poster

When the final group of new IBAs have been declared and the training, monitoring plans and formation of Management Committees completed, a poster/ leaflet will be designed and produced summarising the results of the project and showing all the Important Bird Areas in Lebanon, with a short description of each one.

This will be distributed to schools and other interested organisations and institutions throughout Lebanon. Copies of this will be sent to the MAVA board when it is completed

5.3 Final Conference

A closing conference, to complete the project and further publicise its results, is planned for December 2008, to be held at the Ministry of the Environment in Beirut. At this conference, to which all interested parties will be invited, the summary leaflet see section 5.2 above) will be distributed and discussions will take place regarding what follow-on projects there should be.

6 Publicising the project to the wider scientific community

Chris Naylor, the Director of A Rocha Lebanon, presented a poster entitled “Identification and conservation of new Important Bird Areas (IBAs) in Lebanon” at the Society for Conservation Biology Annual Conference, San Jose, U.S.A. from the 24th to the 28th of June 2006. Details of this, and a copy of the poster, were given in the interim report for the second year of the project.

An application is currently pending for Colin Conroy, A Rocha Lebanon’s Scientific Director, to give a presentation about the MAVA-funded IBA project, at the Middle-Eastern Biodiversity Symposium in Amman, Jordan in October 2008.

Scientific articles publicizing the results of the project, to be submitted to ornithological journals, are planned.

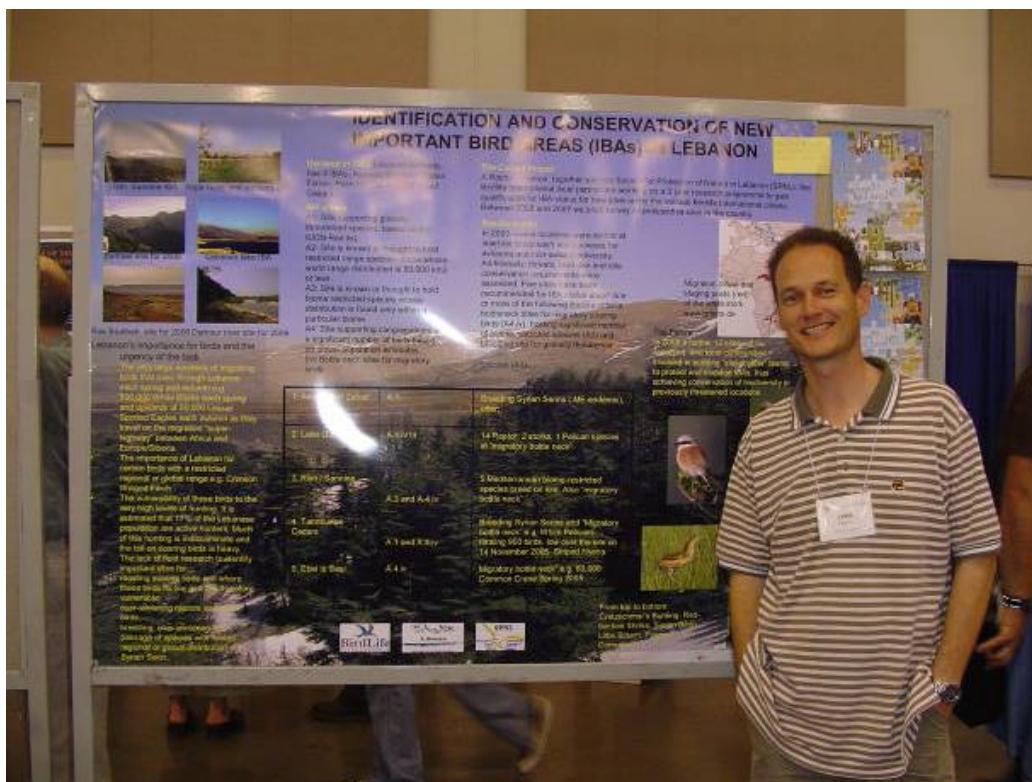


Fig 6.1 Mr Chris Naylor with the poster describing the project, which he presented at the Society for Conservation Biology's annual conference, at San Jose, California, June 2006.

7 Conclusion

In the three years between March 2005 and February 2008, 31 sites, in various parts of Lebanon, were surveyed for birds, in all the seasons of the year. Of these, 12 were surveyed in the first year, 10 in the second year and 9 in the third year. In addition, in the third year of the project, visits were made to four of the sites where surveys were started in the second year, but where they were interrupted as a result of the Summer War in 2006.

The purpose of these surveys was to identify sites which met the criteria, laid down by BirdLife International, for Important Bird Areas (IBAs), so that these sites could be designated, by BirdLife, as IBAs.

Prior to the start of the project, there were only 4 IBAs within Lebanon, despite the fact that it is located on one of the busiest bird migration routes in the world, and at the junction of three continents, and has a large diversity of different bird habitats whose avifauna is influenced by those of Africa, Asia and Europe.

During the project 7 new sites have been designated as IBAs while a further 3 sites are still being considered by Birdlife International with a view to designating them as IBAs of Global or Regional importance.

Following the designation of the 7 new IBAs a range of community-based activities have been carried out at the sites aimed at increasing awareness about birds, their conservation and the importance of monitoring and protecting the sites. These activities will be carried out at the three remaining sites if and when they are declared as Important bird Areas.

This project, which could not have been possible without the generosity of MAVA, has been of vital importance to the conservation of birds in Lebanon and has already started to bear fruit at several of the sites surveyed. At other sites, the work of protecting them is still in its infancy but the foundations laid by this project have provided a strong basis on which future work can build.

8 References

- Porter, RF, Christiansen, S & Schiermacker-Hansen, P. (1996 (Published in Arabic, 2006)). *Field Guide to the Birds of the Middle East*. London: T&AD Poyser.

Appendix 3 – Final IBA year proposal to MAVA – November 2006

The final year of the “Identification and Conservation of New Important Bird Areas in Lebanon” Project, following the war of July & August 2006

A Proposal to the MAVA Board

by

Colin Conroy MSc
Scientific Director, A Rocha Lebanon

on behalf of
A Rocha Lebanon & the Society for the Protection of Nature in Lebanon, the
national BirdLife partner.

November 2006

1 Introduction

On the 12th of July 2006 the Israeli Defence Forces began an aerial bombardment of Lebanon which carried on for 34 days, during which period land forces also entered the country. The war, and its aftermath, inevitably have had an effect on the progress of the MAVA funded *Identification and Conservation of New “Important Bird Areas” in Lebanon* project. It has also necessitated a reassessment of the feasibility of completing the project within the originally proposed time-scale and parameters.

This document outlines the ways in which the project was affected during the war, describes the ongoing effects and proposes a way forward to ensure that the project aims are met within the original time-scale.

2 Direct effects of the war

2.1 Fieldwork

As soon as the aerial bombardment commenced on the 12th of July, all fieldwork had to be suspended because of the risk of moving cars being targeted. This carried on until the UN brokered ceasefire on the 14th of August. After this point fieldwork became theoretically possible again, but because of the large quantities of unexploded ordinance, as well as the absence of the fieldworkers from A Rocha Lebanon (see below), only a small number of visits, to the sites being surveyed by SPNL, were possible.

Because of this, the entire autumn migration season (one of the two most important times of the year in the fieldwork calendar for this project) was missed for seven of the ten sites which were being surveyed during this year. These sites are Damour River Valley, Ramlieh Valley, Hasbaya River Valley, Yammouneh Nature Reserve, Ras Baalbek, Jisr el-Qadi and Bentael Nature Reserve. The remaining three sites, for which fieldwork has been, or will be, completed are the Beirut River Valley (Deir el Harf), Tyre Coast Nature Reserve and Awali River Valley.

2.2 Conservation/ Training at Declared IBAs

Following the 2005-6 fieldwork season five sites were declared as new IBAs in Lebanon. Outputs 4, 5 and 6 of Objective 2 of the project (Conservation (protection) of IBAs) were scheduled to be carried out for those sites starting in August 2006, with a conference bringing together representatives from all of the new IBAs. Because of the war this conference, and subsequent planned activities, had to be postponed.

2.3 Personnel

Following discussions between the A Rocha Lebanon team, the British and French Embassies, the Foreign and Commonwealth Office and the international organisations to which A Rocha Lebanon reports, the decision was made to evacuate the entire A Rocha Lebanon team. This was carried out on the 17th and 19th of July, with most of the team being taken by the British Royal Navy to Cyprus and thence to Britain.

After the ceasefire in August, the situation in Lebanon remained unstable and the team were not given permission to return until the 11th of October, when two team-members, Chris Naylor, (Director of A Rocha Lebanon) and Colin Conroy (Scientific Director A Rocha Lebanon) return for a preliminary visit to assess the situation and to consider the steps necessary for the continuation of the A Rocha Lebanon project in general and the *Identification and Conservation of New “Important Bird Areas” in Lebanon* project specifically.

The other partner organisation in the IBA project, SPNL, had remained in Lebanon, with all their staff, for the duration of the war, but as stated above (section 2.1) have

been limited in the number of survey visits they have been able to undertake since the ceasefire.

3 Potential Future Effects of the War

3.1 Sites scheduled to be surveyed as potential IBAs

18 sites were due to be surveyed in the last year of this three-year project. Of these, 9 are in areas either where there is a high risk of unexploded ordinance on the ground, or where there are issues of military sensitivity making it unwise or impossible to visit with binoculars, telescopes and similar equipment. These are Yanta, Deir el Aachayer, Jabal Rihan, Khiam, Chebaa, Rachaya/ Mount Hermon, Mansouri/ Bayada/ Naqoura, Wadi Khaled and the Litani River Valley. One of these, the Litani River Valley, while not being safe to visit on the ground, can in fact be surveyed adequately from one of the other sites, Beaufort Castle, because the main value of the site is likely to be as a migration bottleneck for soaring birds, which will be visible from Beaufort Castle which over looks the site.

A tenth site, Khallet Khazem, has been converted into a quarry since the start of the project, making it no longer suitable for consideration as a potential IBA .

In addition to these sites, two of the sites at which surveys were begun in 2006, but which were not completed because of the war, are in areas where visiting foreigners might be viewed with suspicion, particularly if they were carrying binoculars and telescopes. For one of these, Ras Baalbek, we already have sufficient data to recommend that Birdlife International make it an IBA, and so no more field surveys need be attempted until the situation improves. The other site, Yammouneh Nature Reserve, is in a remote area, with a majority Shia population where field-workers were greeted with suspicion during visits in the Spring of 2006 and so it would be wise to abandon this area for the time being.

3.2 Conservation of Newly Declared IBAs

3.2.1 Assessment of war damage

An assessment of war damage in newly declared IBAs and sites being recommended for IBA status will be included in the interim report for the 2006 field season.

3.2.2 Training, management committees and site monitoring

Following discussions between SPNL and A Rocha Lebanon it appears, at the time of writing, that this part of the project will be unaffected, except that the training workshops for the new IBAs declared after the 2005 field season, will be delayed until the winter of 2006/7. Contact between SPNL staff and local people in the newly declared IBAs indicate that people are still keen to carry on the project and to work for the protection of their areas.

As was mentioned in Section 3.1, above, Ras Baalbek, one of the sites to be recommended for IBA status from the 2006 field season is in a potentially sensitive area. However, it is thought at present that this should not present a problem if SPNL is the lead organisation in this area.

4 Proposed programme for the last year of the project

4.1 Sites to be visited

4.1.1 New sites to be surveyed all year

It is proposed that the following 10 new sites be surveyed as potential IBAs during the 2007 field season: Qadisha Valley, Orontis River Valley, Litani Valley/ Beaufort Castle (with the two sites being amalgamated as discussed in section 3.1 above), Jabal al Mat, Nahr Ibrahim/Adonis River Valley, Zibdeen, Qammouha, Fneidek, Mishmish and Wadi Jouhannam. The last four sites were in the past considered as one site, but they consist of four distinctly different habitats isolated from each other and so will now be considered separately.

4.1.2 2006 sites to be completed in Autumn 2007

In addition to the 10 sites mentioned in Section 4.1.1 above, it is proposed that surveys be carried out, during the Autumn only, to five of the sites where fieldwork could not be finished in 2006 because of the war. These are, Damour River Valley, Jisr el-Qadi, Ramlieh Valley, Hasbaya River Valley and Bentael Nature Reserve. This will complete the field seasons for these sites.

4.2 Conservation of Newly Declared IBAs

The community based work, including the development and training of local site management groups and the design of monitoring schemes for the five newly declared IBAs from the 2005 field season, will be carried out in the Winter of 2006/7. This work will be commenced in the Autumn of 2007 for any new IBAs from the 2006 field season, with the exception of those sites for which fieldwork is being carried over to Autumn 2007. If any of these sites, or the sites surveyed in the 2007 field season, are granted IBA status, the community/ conservation work will be commenced as soon as notification has been received from BirdLife International.

Table 1 – Summary of sites referred to in the text

	Sites to be completed in 2006	2006 sites where fieldwork was interrupted by war	2006 sites to be continued in 2007	2006 sites where no further fieldwork will be carried out	New sites to be Surveyed in 2007	Sites in original proposal which are no longer viable for study
Beirut River Valley (Deir el Harf)	Y					
Tyre Coast Nature Reserve	Y					
Awali River Valley	Y					
Damour River Valley		Y	Y			
Jisr el Qadi		Y	Y			
Ramlieh Valley		Y	Y			
Bentael Nature Reserve		Y	Y			
Hasbaya River Valley		Y	Y			
Ras Baalbek		Y		Y		
Yammouneh Nature Reserve		Y		Y		
Qadisha Valley					Y	
Orontis River Valley					Y	
Litani River					Y	

Valley/ Beaufort Castle						
Jabal al Mat					Y	
Nahr Ibrahim/ Adonis River Valley					Y	
Zibdeen					Y	
Qammouha					Y	
Fneidek					Y	
Mishmish					Y	
Wadi Jouhannam					Y	
Yanta						Y
Deir el Achayer						Y
Jabal Rihan						Y
Khiam						Y
Chebaa						Y
Rachaya/ Mount Hermon						Y
Mansouri/ Bayada/ Naqoura						Y
Wadi Khaled						Y

Appendix 4.3

Site Descriptions and Site Management Plans – 3rd year of Project

Site 1. Fnaideq Forest

1.1 General Description:

The study was focused mainly on a deciduous oak (*Quercus cerris*) forest and its boundaries, located east of the town of Fnaideq.

This habitat is used on a primary level for grazing and woodcutting, and at a secondary level for agriculture/cultivation, residential and hunting.

Habitat description: This oak grove, distinctive to Lebanon, is very well defined and discrete of its surroundings, the latter being mainly fruit tree farms or conifers; cedar, fir or junipers. Small houses are erected on the north western boundary, but construction is encroaching into the wooded area at an increasing rate. Only mature trees and shrubs occur here, the prevailing intense grazing pressure negating any chance of floral regeneration, as attested in areas where grazing is prohibited due to other land use where a few tree saplings are able to thrive.

Conservation measures taken: none

Geographical Coordinates: 34° 28.353' N, 36° 12.247' E

Total area: 98 ha

Habitat coverage: 85% wooded land, 10% agriculture/cultivation, 5% scrub/bush land

Threats: C (Critical), M (Major), L (Local)

C level – Built development, excessive or irresponsible hunting, deliberate persecution of birds, excessive disturbance to birds, over-grazing/browsing

M level – Over-exploitation of birds/eggs, Solid waste pollution, i.e. debris/garbage, Tree cutting.

L level – Agriculture intensification.

3.2 Comments on 2007 observations

This woodland housed a limited number of resident and migrating species, yet the variability observed during the different visits indicated that this site is still of some value to birds on passage. Wryneck, Golden Oriole, and a few warblers were recorded on migration, as well as migrating raptors and other aerial feeding species. A few biome-restricted species such as the **Sardinian Warbler, Masked Shrike and Black-headed Bunting** breed here and the occurrence of the Near Threatened **Syrian Serin** population is of significance to this site.

Other wildlife spotted includes the Persian Squirrel, which was not shy or secretive. As the site forms part of a larger system including the following three sites, which, when viewed as a whole fulfils the criteria for designation as an IBA, the supporting notes for IBA status will be given after the site descriptions for all four sites.

Number of species observed: 53

Number of visits in 2007: 10

Dates: 30th March, 24th April, 5th & 15th May, 20th June, 16th & 28th August, 21st September, 3rd & 26th October.

Site 2. Mechmech

2.1 General Description:

This site, in the foothills of Mount Qammouaa consists mainly of cultivated land interspersed with mixed conifers, oak and other low trees and shrubs, east of the municipality of Mechmech. The land is used on a primary level for agriculture and cultivation, and at a secondary level grazing, woodcutting and hunting.

Habitat description: Rich terraced mixed farmland, fruit trees and annual crops, with numerous small agricultural pools and ponds; a few creeks and springs do abound. Mature conifers and other woodland trees and bushes, remnants of the forests of old, grow in scattered heavily grazed sectors dividing the cultivated lands. The prevailing intense grazing pressure negates any chance of tree regeneration.

Conservation measures taken: none

Geographical Coordinates: $34^{\circ} 26.412' N$, $36^{\circ} 11.592' E$

Total area: 3774 ha

Habitat coverage: 60% agriculture/cultivation, 25% wooded land, 10% scrub/bush land 5% rocky hills.

Threats: C (Critical), M (Major), L (Local)

C level: Excessive or irresponsible hunting, excessive disturbance of birds, tree cutting, over-grazing/over-browsing, toxic pollution.

M level: Deliberate persecution of birds, over-exploitation of birds/eggs,

L level: Conversion to agriculture, solid waste pollution, i.e. debris/garbage.

2.2 Comments on 2007 observations

This cultivated land and mixed woodland has a broad base of resident species and has proved to be a haven for autumn migrants and of significance to breeding summer visitors. Typical farmland avifauna abounds in this site complemented by a variety of woodland species. 5 species of shrikes were recorded here, of which 2 breed here; the finches were well represented highlighted by the nesting of the Near Threatened **Syrian Serin** population, where emphasis and effort should be exerted in its protection and conservation.

Most abundant of the nesting visitors were the shrikes, buntings, **Spanish Sparrow** and **Syrian Serin**. Also of interest here was the confirmed breeding records of the **Mistle Thrush**, which was not previously known to nest in Lebanon . Breeding biome-restricted species include **White-throated Robin**, **Upcher's Warbler**, **Sardinian Warbler**, **Sombre Tit**, **Western Rock Nuthatch**, **Masked Shrike**, **Black-headed Bunting** and **Syrian Serin**. However, this site is plagued by excessive and irresponsible hunting, compounded by extensive human disturbance, although thinly spread at times was very prevalent throughout the farming season.

Number of species observed: 76

Number of visits in 2007: 11

Dates: 30th March, 26th April, 4th & 16th May, 22nd June, 17th & 29th August, 21st September, 3rd & 26th October, 6th November.

Site 3. Qammouaa

3.1 General Description:

This is a mountainous site east to north east of the municipality of Fnaideq and consists mainly of varied wooded land, with some cultivation in one flat grass sections.

The land is used on a primary level for grazing, woodcutting and hunting, and at a secondary level for agriculture/cultivation and recreation.

Habitat description: A varied site, consisting of sub-alpine rocky gradients descending to scattered coniferous slopes, those being divided by flat grassy agricultural/recreational lands from a mixed trees undulating zone. Cedar, fir and junipers are the predominant conifers. Several water springs and some agricultural ponds abound, mostly used as watering holes. Mature trees prevail in all sectors of this area, largely due the widespread extreme grazing pressure.

Conservation measures taken: none

Geographical Coordinates: 34° 29.579' N, 36° 14.031' E

Total area: 1023 ha

Habitat coverage: 65% wooded land, 20% scrub/bush land, 10% recreational, agriculture/cultivation, 5% rocky hills.

Threats: C (Critical), M (Major), L (Local)

C level: Over-exploitation of birds/eggs, excessive or irresponsible hunting, deliberate persecution of birds, excessive disturbance of birds, over-grazing/ browsing, tree-cutting.

M level: Excessive soil erosion/degradation, solid waste pollution, i.e. debris/garbage.

L level: Built development.

4.2 Comments on 2007 observations

The variety of habitats in this site proved conducive to a rich and varied avifauna. Diverse migrants, breeding visitors and high altitude specialists complement the limited resident population typical of such high elevation habitats. Most interesting of the height adapted species were the **Horned Lark**, **Pale Rock Sparrow**, and **Crimson-winged Finch**. Confirmed nesting of the **Hoopoe** and the Near Threatened **Syrian Serin** here are worthwhile addition to the country's ornithological data banks. Of note is the number of Biome-restricted species breeding here such as **Tawny Owl**, **Black-eared Wheatear**, **Finsch's Wheatear**, **Upcher's Warbler**, **Sombre Tit**, **Western Rock Nuthatch**, **Masked Shrike**, **Pale Rock Sparrow** and **Black-headed Bunting**. The soaring birds migration, although limited in quantity included 26 species. The **Goldcrest** record is significant for Lebanon as this species is not recorded very regularly here.

However, the extent of grazing/browsing, hunting and woodcutting, being so abundant and extensive yet irreversible calls for the implementation of some enforceable control measures.

Number of species observed: 112

Number of visits in 2007: 12

Dates: 30th March, 10th & 25th April, 5th & 16th May, 20th June, 15th & 26th August, 19th September, 3rd & 26th October, 6th November.

Site 4. Wadi Jouhanam

4.1 General Description:

The site is the valley of the Abou Moussa river; found in the Sir ed Danniye area of the Akkar region in the north of the country. It is located north west of Quemmamine, south east of Qabaait and south of Hrar villages, with the nearest town being Mechmech to the east.

The land use is very limited, due to the steep, heavily wooded slopes of the valley, however, grazing and woodcutting could be considered as a primary use level, and at a secondary level agriculture/cultivation.

Habitat description: Deep river valley, typical Mediterranean maquis community predominates on the steep slopes, and the thickly vegetated valley floor is cultivated in places with fruit trees or other annual crops.

Conservation measures taken: none

Geographical Coordinates: 34° 26.174'N, 36° 07.971'E

Total area: 375 ha

Habitat coverage: 70% woodland/forest, 15% rocky hills and grass, 10% scrub/bush land, 5% agriculture/cultivation.

Threats: C (Critical), M (Major), L (Local)

C level: Over-grazing/over-browsing, wood cutting

M level: Excessive disturbance of birds, solid waste pollution, i.e. debris/garbage.

L level: Over-exploitation of birds/eggs, Excessive or irresponsible hunting, Deliberate persecution of birds.

4.2 Comments on 2007 observations

This river valley habitat had healthy resident bird populations. It also proved to be an important staging post for the migrating aerial feeders such as swifts and hirundines, and to two species of soaring birds (**White Pelicans** and **Common Cranes**). Of particular interest here is the resident **Dipper** population, the subspecies occurring in Lebanon, *Cinclus cinclus rufiventris*, being endemic to the country. Biome-restricted species such as **Tawny Owl**, **Black-eared Wheatear**, **Sardinian Warbler**, **Western Rock Nuthatch** and **Masked Shrike** breed in this area and the Near Threatened **Syrian Serin** does occur.

Various parts of the valley were surveyed during the different visits to ensure thorough coverage of the diverse habitats in this site, also the observed threats, although of some significance, were localised and not thought to be detrimental. However, while the high variability and floral diversity of the whole gorge is potentially attractive to bird populations providing food, shelter and nesting niches, this was not reflected by bird species observed or numbers recorded. These findings were backed by anecdotal information so it is felt that this area merits further research in the future.

Number of species observed: 50

Number of visits in 2007 10

Dates: 30th March, 9th & 25th April, 6th May, 19th June, 15th August, 18th September, 2nd & 25th October, 5th November.

4.3 Supporting notes for Upper Mountains of Akkar-Donnieh as an IBA

The proposed site consists of four locations Wadi Jouhanam, Mechmech, Fnaideq and Qammouaa, each of which qualifies for an IBA designation on its own; presence of globally threatened species being the main reason, and the occurrence of endemic and biome restricted species and soaring birds as secondary reasons. However, these sites are closely related, being congruous culturally and geobiologically, also plagued by similar threats. There might appear individual differences particular to each site, yet, they all do share a very wide buffer zone of similar nature.

In total there were 13,189 birds counted belonging to 134 species. Of these there were 45 species occurring in 3 or more locations. Although this number might represent only one third of the overall species recorded; it would gain significance upon considering the totals recorded for some of these sites such as Wadi Jouhanam 50, Fnaideq 53, and Mechmech 78. Also, nearly half of all species logged were represented by 10 individuals or less, too small a number to be dispersed over the 4 sites. The regional endemic species, **Syrian Serin** (*Serinus syriacus*), which is also classed as Near-Threatened by BirdLife International, is found in all four sites, with at least 28 pairs confirmed as breeding in the whole area, although this figure could be much higher. 13 different biome-restricted species, mostly (7 species) from the Irano-Turanian Biome, were recorded as breeding in the whole site in 2007. Several species of conservation concern (globally or in Europe), including **Pallid Harrier**, **Red-footed Falcon** and **European Roller** have been recorded passing through the area on migration.

Also, the proposed IBA is located in North Lebanon and falls in the heart of a projected 220 km² National Park acknowledged for its rich biodiversity and the old vegetation varieties it harbours. This area is listed at the top of priority sites designated for protection in the global framework of the Lebanese National Master Plan for Land Use Management (2004), the National Biodiversity Country Study in Lebanon (UNDP and MoA, 1996), the National Biodiversity Strategy and Action Plan (1998) and the National Action Plan to combat desertification (2003). The organisation MADA – a Lebanese conservation NGO – is already carrying out a major project entitled “Setting the path towards the establishment of a national Park in North Lebanon and the promotion and support of ecotourism” working towards the realization of the national park and the conservation of the site with the local community.

Upon reviewing and evaluating the above noted facts, it was felt prudent to consider the 4 sites investigated as parts of one ecosystem and to be recommended as one major IBA under categories A1, A2, A3 and A4iv. This would allow it to be handled efficiently under one management body by unifying decision making, reducing duplication and overlap of authorities.

Globally Near-Threatened Species: Syrian Serin (at least 28 pairs)

Restricted-range Species: Syrian Serin

Biome-restricted Species: Tawny Owl (European Temperate Forest Biome), White-throated Robin (Irano-Turanian Biome (IT)), Black-eared Wheatear (Mediterranean Biome (Med)), Finsch's Wheatear (IT), Upcher's Warbler (IT), Sardinian Warbler (Med), Sombre Tit (IT), Western Rock Nuthatch (IT), Masked Shrike (Med), Pale Rock Sparrow (IT), Crimson-winged Finch (Eurasian High Montane Biome), Syrian Serin (IT) and Black-headed Bunting (Med)

Conggregations : White Pelicans, Cranes, Levant Sparrowhawks, White Stork

The occurrence of nearly 1500 Levant Sparrowhawks over Qammouaa on the 19th of September, more than 2300 White Pelicans over three dates including 2000 low over Wadi Jouhanam on the 2nd of October, 400 Cranes there on the 5th of November, and 375 White Storks over Qammouaa in early October show the importance of this area for congregations of migratory soaring birds.

Although these numbers are below the set thresholds, it is our view that as the field days represent only a small proportion of the migration season for these species, and also taking into account the large size of the area (meaning that on days when large numbers were passing through many might have gone through unobserved), it seems likely that in the whole Autumn season more than 20,000 soaring birds will have passed over the area.

References

CDR in collaboration with IAURIF/Dar El Handasah, **The Lebanese National Master Plan for Land use management**, December 2004.

The Ministry of Agriculture in cooperation with UNDP funded by GTZ, **the National Action Plan to combat desertification**, June 2003.

The Ministry of Agriculture in cooperation with UNDP funded by GEF, **the National Biodiversity Country Study in Lebanon**, 1996.

The Ministry of Environment and UNDP with funding from GEF, the **National Biodiversity Strategy and Action Plan**, 1998.



Fig 1. A hillside in Mechmech, in the proposed Akkar-Donnieh IBA, showing the contrast between uneroded areas, where some trees still remain, and heavily eroded ones which have resulted from unmanaged wood-cutting and overgrazing

4.4 Site Management Statement – Upper Mountains Akkar-Donnieh

Introduction

This document provides a summary description of the Upper Mountains of Akkar-Donnieh proposed-IBA, and some of the bird species to be found there (with particular reference to those of conservation concern). It also describes current and future threats to the site and the intention to protect and manage it to enhance its value to wildlife.

Site description

This site is part of the northern mountainous area of Lebanon, hosting the country's largest continuous vegetation assemblages, including diverse forest varieties. It ascends in a north-easterly direction along the western face of this mountain range, from Wadi Jouhanam (Hell Valley) in the west to the Qammouaa ridges in the north east. The steep slopes of the river valley are heavily forested, harbouring a variety of tree species typical of to the Supra-Mediterranean life zones. Calabrian Pine (*Pinus brutia*) is the dominant tree here complimented by significant patches of mixed trees comprising Oak (*Quercus* sp), Pistachio (*Pistacia* sp), Storax (*Styrax officinale*) and Maple (*Acer* sp) with a rich, thick understorey. Higher up to the north-east, are the terraced fields of Mechmech interspersed by stands of predominantly mature Cedar of Lebanon (*Cedrus libani*), fir (*Abies* sp) and junipers (*Juniperus oxycedrus* and *Juniperus excelsa*). There is a scattering of other trees and shrubs, with Storax and Maple being the most common. All fallow land here, is very heavily grazed, negating any chance of floral regeneration. Further north east is the Qammouaa region, which hosts four different habitats;

- i. Calabrian Pine at the lowest altitudes,
- ii. The remnants of one of the largest Turkey Oak, *Quercus cerris*, stands found in Lebanon with clusters of mixed shrubs varieties and scattered junipers in the lower intermediate altitude.
- iii. Mixed Fir, Cedar of Lebanon and Junipers with Fir and Cedar alternating as the dominant species, in the higher intermediate elevations.
- iv. Predominantly Juniper sub-alpine zone, with stunted shrub varieties located at the highest altitude.

Importance of site for birdlife and biodiversity

The proposed IBA is located in a zone of high biodiversity; with over 500 floral species identified to date, it is of great importance to resident, Autumn migrating, summer breeding and over-wintering bird species. The avifauna includes a large population of **Syrian Serin** (*Serinus syriacus*) which is of global conservation concern (being classed as Near Threatened by BirdLife International) and is also a Restricted-range species being endemic to the Middle-East and a Biome-restricted Species of the Irano-Turanian Biome. Lebanon holds the majority of the breeding population of this species and so its presence here at relatively high density, is enough on its own to make this site worthy of protection. Many Biome-restricted Species, such as **Tawny Owl**, **White-throated Robin**, **Black-eared Wheatear**, **Finsch's Wheatear**, **Upcher's Warbler**, **Sardinian Warbler**, **Sombre Tit**, **Western Rock Nuthatch**, **Masked Shrike** **Pale Rock Sparrow**, **Crimson-winged Finch** and **Black-headed Bunting** breed here. Of these, **White-throated Robin** and **Finsch's Wheatear** are very rare or unknown as breeders elsewhere in Lebanon. Observations made in 2007 show that this site is also important for soaring bird migration, particularly in the Autumn, when large numbers of **Levant Sparrowhawks**, **White Pelicans**, **Common Cranes** and **White Storks** were recorded passing through.

Conservation objectives

The birds found in this site include, residents, migrants (both soaring and non-soaring), winter visitors, and summer breeding visitors, however the main conservation objectives for the different groups are all the same. To this end, the specific objectives are:

- i. To assist in arresting any decline in the populations of these species and to ensure that there is not a net reduction in numbers of these birds as they occur throughout the site.
- ii. To better protect and shelter birds and other wildlife in appropriate locations, by halting habitat loss and degradation and by restoring, where possible, habitat that has already been lost, thus facilitating the increase in their numbers.

Key management issues

Hunting

Without implementation of some degree of control/regulation of hunting activity, this site will continue to be a high-risk location for birds, rather than a haven. The involvement of the local municipalities/land owners is essential in achieving this and preliminary discussions have begun with the local communities.

Action: Establish and enforce a hunting management plan, allowing the birds some safe resting and feeding time, and to allow soaring birds to pass safely over the area.

Disturbance to birds

The disturbance to birds by humans comes from diverse sources includes farming, grazing, hunting and wood cutting.

Action: An extensive awareness campaign is needed in the local communities detailing the fundamentals of sustainable utilization of resources. This needs to be done sensitively and taking account of the fact that many of the activities which cause disturbance have deep cultural roots.

Habitat degradation

This is mainly caused by over-grazing by sheep and goats, and by unplanned and unsustainable wood-cutting, which, by removing trees and scrub and stopping its regeneration, result in erosion of the soil from the steep slopes of the hills and the loss of scrub and woodland which are important as habitat for wildlife.

These damaging activities are caused by well meaning people who are only trying to make a living in a difficult place and time, and so this makes it essential that any regulation or control is done sensitively and in partnership with the local communities.

Action: Awareness campaigns have been put in place and are already in progress with selected members from each local community.

Built developments

Large family size and increased affluence within certain sectors of the local communities is leading to encroachment by houses on many pristine habitats in the area, and there is a high risk that this site could also be affected unless something is done to halt the advance of built development.

Action: Discussions with the local municipalities have been instigated with the aim of setting organizational controls.



Fig 2. Aerial photograph showing the boundary of the proposed IBA at Akkar-Donnieh.



Fig 3. Aerial photograph of Lebanon showing the location of the proposed IBA at Akkar-Donnieh.

Site 5. Bentael Reserved Area

5.1 General description:

The site is located in the northern half of Lebanon, in the hills to the east of the town of Jbail, north of Beirut. It is a steep sided valley, mostly covered with dense woodland, with a low level of agriculture and some grazing

Habitat description: The main habitats are Mediterranean oak woodland, dominated by the evergreen oak species *Quercus calliprinos*, with a scattering of deciduous oak *Quercus infectoria*) and other tree species including Strawberry Tree (*Arbutus* sp.), and pine woodland, dominated by Stone Pine (*Pinus pinea*). It varies in structure from dense, but young, woodland to more open woodland with some scrubby vegetation. There are several vertical cliffs of bare rock with many small caves and crevices. There is one small hamlet just outside the reserve, with some agriculture (terraces and ‘poly-tunnels’) surrounding it.

Conservation measures taken: Designated as a ‘reserved area’. Where the main road borders the reserve there is a high fence and signs indicating that hunting and dumping of rubbish are forbidden. Entry to the site is not controlled.

Geographical Coordinates: 34°07.926N, 35°41.204E

Total area: 150 ha (NB this is the total area of the nature reserve and doesn’t include the adjacent unprotected forest)

Habitat coverage: 85% woodland, c13% scrubland, c2% bare rock, <1% agriculture/cultivation, <1% artificial.

Threats: C (Critical), M (Major), L (Local)

L Level –Deliberate persecution of birds (low-levels of hunting, both from road and within the reserve). Debris/garbage pollution (Evidence of rubbish dumping from road, which may have been stopped by erection of fence). Loss of Habitat/ development (potential problem in the areas of forest which fall outside the reserve).

5.2 Comments on observations at Bentael during 3rd year of the project

Two visits were carried out in Autumn 2007 and one more in late February 2008. This was because the Summer War of 2006 interrupted the Autumn fieldwork in 2006.

Although the Spring visits in 2006 had shown very little in the way of soaring bird migration, one of the two Autumn visits yielded more than 1200 soaring birds on passage, including 912 **European Honey-buzzards**, 103 **White Pelicans**, and 191 **Levant Sparrowhawks**, plus small numbers of other species. This indicates clearly that the site does hold some importance as a bottle-neck site for soaring birds at least in Autumn.

5.3 Supporting Notes for Bentael as a Potential Middle Eastern IBA

Although this site does not satisfy the criteria to qualify as a full Important Bird Area, the size of the soaring bird passage on a single day in September indicate that there is a very high likelihood that the passage over the whole Autumn season will exceed the 3000 raptors needed for the site to qualify as a Middle-Eastern IBA (Criterion B1iv ‘The site is a ‘bottleneck’ site where over 5,000 storks, or over 3,000 raptors or 2,000 cranes regularly pass on spring or autumn migration’).

Bentael also has other factors which will work in its favour in any decision about whether to grant it IBA status or not. It is a small, self-contained area, which is already officially a Protected Area and as such has a Management Committee.

Therefore we recommend that Bentael be designated as a Middle Eastern IBA on the grounds that it is a migration bottle-neck site with over 3000 raptors passing through in Autumn.

Number of species observed in 3rd year: 44

Number of species observed over both years : 62

Number of visits in 3rd year of project: 3

Dates: 14th September, 2nd October 2007 & 2nd February 2008.

1.3 Site Management Statement – Bentael

Introduction

This document provides a summary description of the Bentael potential-*Middle-Eastern IBA* site and some of the bird species to be found there. It also describes current and future threats to the site and the intention to protect it and manage it to enhance its value for wildlife.

Site Description

Situated in the hills north of Beirut, to the east of the town of Jbail, Bentael Reserved Area is a deep valley with steep, heavily wooded sides. The nature reserve, which was created in 1981, only covers the northern side of the valley, although the habitat on the southern side is continuous with that in the reserve, with the trees all being approximately the same age. The woodland is divided into two main parts. In most of the area it is typical Mediterranean oak woodland dominated by the evergreen oak species *Quercus calliprinos* but with the deciduous species *Quercus infectoria* scattered throughout the forest. Other tree species include the Greek Strawberry Tree (*Arbutus andrachne*). There is also an area of pine woodland, dominated by Stone Pine (*Pinus pinea*), covering about one third of the area of the nature reserve, in the north-western part of the valley. The woodland cover is mostly fairly dense with small areas of more open scrubby habitat. However, the trees all appear to be quite young and possibly only date from the creation of the reserve. On the northern side of the valley there are several large areas of bare rocky crags with numerous caves of various sizes. At the eastern end of the site there are some terraces containing arable agriculture, orchards and plastic ‘poly-tunnels’ used for growing vegetables such as tomatoes.

The river which runs along the southern boundary of the Nature Reserve is dry for much of the year.

Importance of site for birdlife and biodiversity

Although this site is scenically very beautiful and a good example of Mediterranean oak and pine woodlands, its main value for birds is as a bottleneck site for soaring birds on migration. The data indicates that the passage is bigger in Autumn than in Spring, although this may be down to chance, with the visits in Autumn happening to coincide with large groups of migrating birds while those in Spring didn't. Only longer term studies, with birdwatchers present during a greater proportion of both seasons over several years will show whether this difference between Spring and Autumn is real or artificial. On one day in September, 15 species of soaring birds were seen of which 14 were birds of prey. This count included 912 **European Honey-buzzards**, 191 **Levant Sparrowhawks** and 103 **White Pelicans**. The figure for **European Honey-buzzards** is particularly interesting as this date is after the main peak passage period for this species and so it seems likely that the actual number passing over the site throughout the season is much higher.

Although the Spring passage was generally much smaller, groups of 120 **White Pelicans** and 80 **Common Cranes**, as well as smaller numbers of 6 other soaring bird species, indicate that the site does have some significance for soaring birds in this season also.

Although there is only one biome-restricted species (**Sardinian Warbler**) confirmed as breeding here, given the habitat and the relatively undisturbed nature of the site it is likely that several others, including **Masked Shrike**, **Black-eared Wheatear** and **Western Rock Nuthatch** also breed here, although maybe in small numbers. Several of the other breeding species, while not being biome-restricted or designated as endangered, are nonetheless interesting and indicative of the general health of the ecosystem. These include **Long-legged Buzzard**, **Common Kestrel**, **Chukar**, **Blue Rock Thrush**, **Common Blackbird**, **Lesser Whitethroat**, **Orphean Warbler**, **Spotted Flycatcher**, **Great Tit**, **Eurasian Jay**, **Common Chaffinch**, **European Greenfinch** and **European Goldfinch**.

No wild mammals were observed during visits but evidence of Wild Boar and Persian Squirrel was seen, while websites concerning the nature reserve mention that Porcupine and Red Fox are

also found there. Striped Hyaena is also possible, as it is found in similar densely wooded, steeply sloping areas in nearby parts of Lebanon.

The numbers of soaring birds seen during the project do not warrant the recommendation of this site as a full Important Bird Area. However, even a very conservative extrapolation of the results from the Autumn indicate that birds of prey on passage in that season are likely to exceed 3,000 individuals, and so we recommend that Bentael Reserved Area be designated as a Middle-Eastern Important Bird Area on the basis of criterion B1iv

Conservation Objectives

i. **Migratory species**

That all bird species passing through this area on their spring or autumn migrations, be protected from harassment and indiscriminate killing.

ii. **Conservation of the forest**

That the entire forest habitat be protected from excessive disturbance and in particular that damaging activities such as tree-cutting and hunting be prevented within the reserve. The areas of the valley outside the reserve are nevertheless part of the same ecosystem and so efforts should be made to persuade the landowners to protect the forest on their land and to prevent, hunting, wood-cutting and charcoal-burning.

Key Management Issues

Hunting

Some evidence of hunting (discarded shot-gun cartridges) was seen on the southern side of the valley, outside the boundaries of the nature reserve. As the main ornithological interest of the site is for migrating soaring birds, it is important that hunting is controlled in the area immediately surrounding the reserve, as birds do not recognize boundaries.

Action: In consultation and partnership with the Reserve Committee, local communities, local municipalities and the police, establish and enforce a hunting management plan to allow soaring birds to pass safely over the area and to allow all birds to be free from persecution.

Loss of Habitat due to Built Development

This is a potential problem, particularly in the immediate surroundings of the reserve, and one which needs to be assessed.

Action Develop relationships between the Nature Reserve Committee, and representatives of local municipalities and landowners to ensure that the areas of forest outside the reserve are recognized as being part of the whole ecosystem and that the landowners are encouraged to protect them.

Dumping of garbage

This problem appears to have been stopped by the erection of a high fence where the reserve boundary goes along the road, but it is likely to remain a potential problem and so requires ongoing monitoring.

Action Monitor the problem and if it becomes an issue again, design and implement an appropriate plan of action.

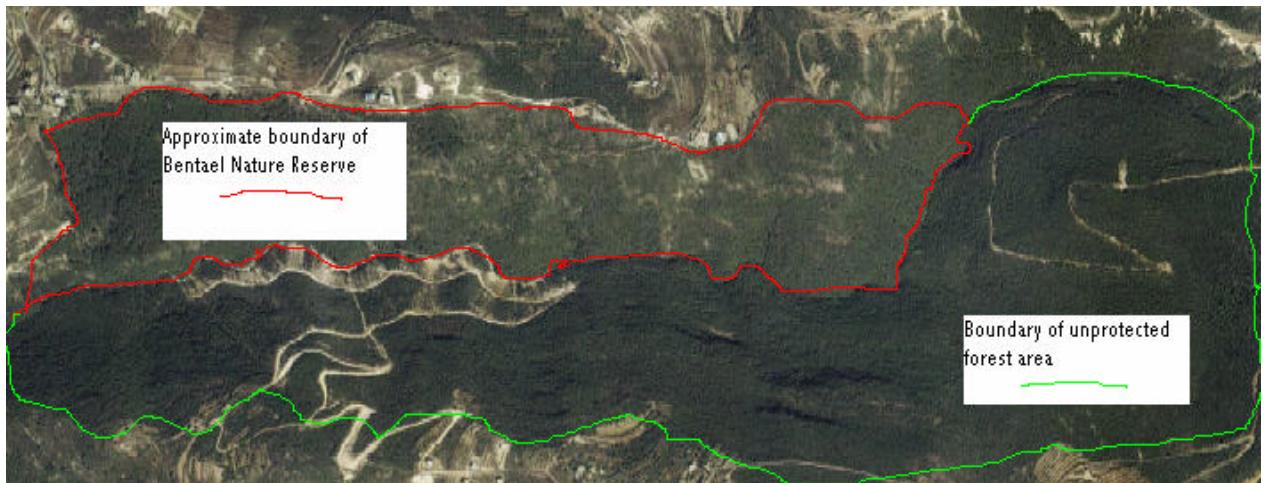


Fig 4 – Aerial photograph showing Bentael Nature Reserve and the adjacent area of forest



Fig 5 – Map of Lebanon showing location of Bentael

Site 6. Ramlieh

6.1 General description:

The site is situated in the Shouf region of the Mount Lebanon range south of the towns of Bhamdoun and Saoufar, and about 17km south-east of Beirut. It is a wide valley, with fairly gently sloping sides, but with some vertical cliffs at the higher elevations on both sides of the valley. The River Safa runs through the valley and flows in a roughly east-north-east to west-south-west direction.

Habitat description: The main habitat on the valley floor is coniferous woodland, dominated by Pine (*Pinus* sp.), which is replaced by terraced orchards towards the head of the valley. The sides of the valley are dominated by short scrubby vegetation, with signs of heavy grazing, and bare rock. There are a few small quarries on the edges of the site.

Conservation measures taken: None

Geographical Coordinates: 33°44.820N, 35°39.000'E

Total area: 928 ha

Habitat coverage: 40% Scrubland, 35% woodland, 10% bare rock, 10% agriculture/cultivation, 5% artificial(buildings and quarries).

Threats: C (Critical), M (Major), L (Local)

M Level – Over-grazing/over-browsing

L Level – Deliberate persecution of birds (hunting), Extraction industry (quarries), Loss of habitat/ development.

6.2 Comments on observations at Ramlieh during 3rd year of the project

As at Ramlieh, no visits were possible to this site in Autumn 2006 because of the aftermath of the Summer War that year. Instead 7 visits were carried out Autumn 2007. Due to the nature of the site, there was some initial difficulty finding a suitable point from which to observe the southward passage of soaring birds, and so the observations on those 7 visits were made from several different places.

Although, as at the previous site, Bentael, raptor passage in Spring had been somewhat disappointing, over the seven visits in Autumn 2007 a total of 2488 birds of prey were seen passing through the area. In addition, staff of the environmental NGO, AFDC, who are based in Ramlieh, reported that on several occasions in our absence there were large flocks of soaring birds, including Pelicans, passing over, but they had no accurate estimates of numbers.

6.3 Supporting Notes for Ramlieh as a Potential Middle Eastern IBA

Ramlieh, as the previous site, Bentael, clearly does not at present qualify as a full IBA. However, given that the raw data from 2007 only just fall short of the criteria for a Middle Eastern IBA, and taking into account the fact that the dates of visits only represent a small proportion of the whole season, plus the fact that no visits were carried out during the peak passage season for **European Honey-buzzards** (during the last 2 weeks of August), plus the anecdotal evidence of large passages of soaring birds made by local people, we recommend that Ramlieh be designated as a Middle-Eastern Important Bird Area under Criterion B1iv.

Number of species observed in 3rd year: 35

Number of species observed over both years : 47

Number of visits in 3nd year of project: 7

Dates: 4th September, 5th September, 20th September, 27th September, 18th October, 23rd October, 6th November 2007.

6.4 Site Management Statement – Ramlieh

Introduction

This document provides a summary description of the Ramlieh potential *Middle-Eastern IBA* site and some of the bird species to be found there. It also describes current and future threats to the site and the intention to protect it and manage it to enhance its value for wildlife.

Site Description

Situated in the Shouf region of the Mount Lebanon range, to the south of the towns of Saoufar and Bhamdoun, and about 17km south-east of Beirut, the Ramlieh site is a wide valley with gently sloping sides but with some vertical cliffs on both sides of the valley at the higher elevations. The River Safa (which becomes the Damour River in its lower reaches) flows through the site in a roughly east-north-east to west-south-west direction.

The habitat on the valley floor is dominated by coniferous woodland, with pines (*Pinus* sp) being the main tree species. This is replaced by terraced orchards towards the head of the valley. The sides of the valley are dominated by short scrubby vegetation with signs of heavy grazing. There are also small areas of Pine woodland on the sides of the valley in various places. The small village of Ramlieh occupies part of the valley floor at the western end of the site.

The site currently has no protection, although an environmental NGO, the Association for Forest Development and Conservation (AFDC), has its headquarters in the valley, above the village of Ramlieh and they have been involved with various community based projects aimed at the conservation and restoration of the natural habitats in the area, and are also encouraging the development of eco-tourism in the area.

Importance of site for birdlife and biodiversity

The main value of the site is as a bottle-neck site for soaring bird migration, although the woodlands and orchards hold good breeding populations of many of the expected species of these habitats.

As has been the case for many of the sites surveyed during this project, the relatively small number of visits has meant that the best days for soaring bird migration have not always coincided with the days when visits were being carried out. Consequently, the numbers of soaring birds seen during two migration seasons (Spring 2006 and Autumn 2007) were not enough to warrant the site's recommendation for full Important Bird Area status. However, based on the numbers of raptors seen in Autumn, we recommend that Ramlieh be designated as a Middle Eastern IBA on criterion Biv. This requires there to be at least 5000 storks, 3000 raptors or 2000 cranes during either the Spring or Autumn season. During the Autumn season 2479 raptors were seen, including 1595 Levant Sparrowhawks on one day. In addition, during our visits in Autumn 2007, local people and staff of the environmental group AFDC reported seeing large numbers, possibly thousands, of soaring birds, including **White Pelicans**, passing over on the days when we weren't there. It seems very likely therefore, that numbers of soaring birds will easily satisfy the requirements for Middle-eastern IBA status, and future fieldwork may eventually warrant the site being upgraded to full IBA.

Although not enough to warrant the site being granted IBA status on the grounds of criterion A3 ("The site is known or thought to hold a significant assemblage of the species whose breeding distributions are largely or wholly confined to one biome") there are nevertheless four biome-restricted species for which breeding is suspected or confirmed at Ramlieh. These are **Black-eared Wheatear**, **Sardinian Warbler** and **Masked Shrike**, from the Mediterranean Biome, and **Western Rock Nuthatch**, from the Irano-Turanian Biome. Also of interest among the breeding species is **Long-legged Buzzard**, whose presence throughout the year is one sign of a healthy ecosystem.

Other wildlife which occurs here includes Red Fox and many species of butterfly such as Common, Southern and Scarce Swallowtail and Southern White Admiral.

Conservation Objectives

i. **Migratory species**

That all bird species passing through this area on their spring or autumn migrations, be protected from harassment and indiscriminate killing.

ii. **Breeding bird species**

That all the habitats within the area be managed appropriately for all wildlife, including birds, and that birds breeding within the area be afforded protection from disturbance during the breeding season.

Key Management Issues

Grazing

Overgrazing appears to be a problem, particularly in the more open habitats. This leads to loss and degradation of scrub and prevents regeneration of shrubs and trees.

Action Work with local communities and NGOs to establish a more controlled grazing regime as part of an integrated management plan for the whole site. As the area is under multiple ownership, this will take some time to establish, but the creation of a Site Support Group and a Management Committee will be important first steps.

Hunting

Some evidence of hunting was seen and heard during visits although the exact extent of the problem is unclear at the present time.

Action Community based education work and awareness raising will be useful in both assessing the scale of the hunting here and reducing it. The Association for Forest Development and Conservation (AFDC) is well placed to be the lead partner in such work and have already been involved in running environmental education programmes at their centre in Ramlieh.

Loss of Habitat due to Development, and Quarrying

These are potential problems, particularly on the outskirts of the two main villages within the site, Ramlieh and El Mecherfe and in the case of quarrying, at the edges of the site.

Action The involvement of the local authorities in the management planning process will be essential to ensure that any development is carried out in a sensitive way and with minimum disturbance to wildlife.

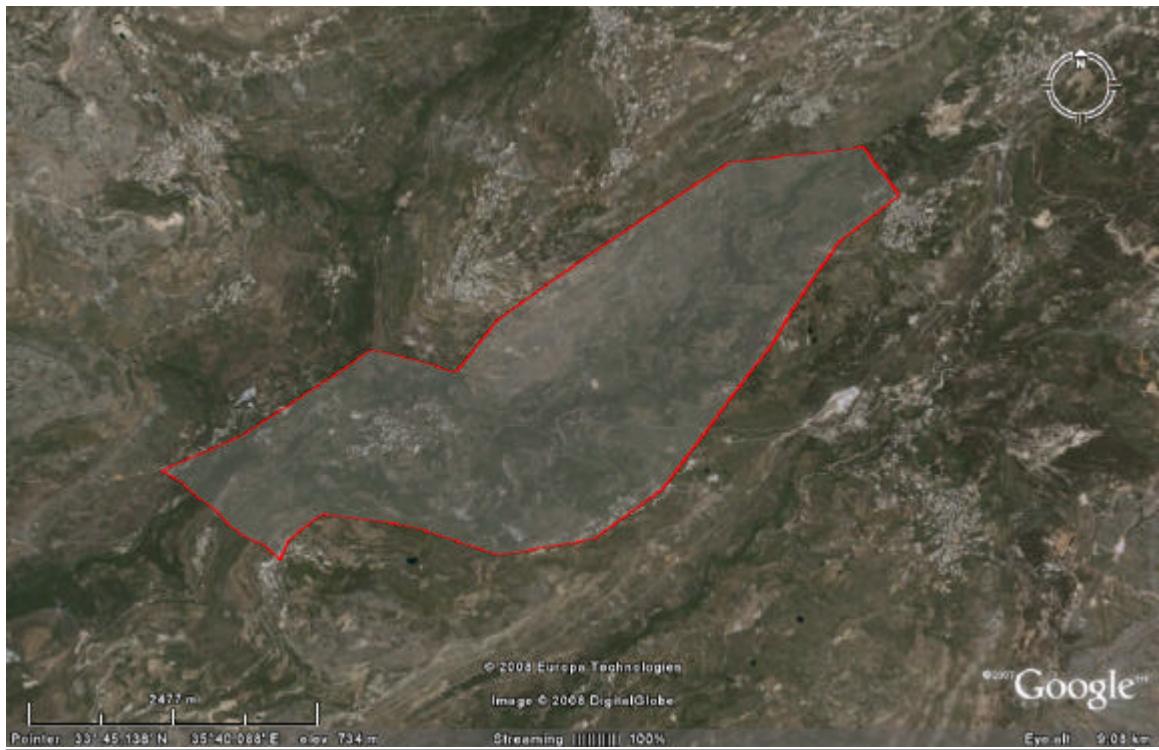


Fig 6. Arial photograph showing the Ramle Valley and the surrounding area



Fig 7. Arial view of Lebanon showing the Ramle Valley

Site 7. Jabal Moussa

7.1 General description:

The site is a mountain which extends westwards from the main Mount Lebanon chain along the southern edge of the Nahr Ibrahim (Adonis River), just to the west of Jabal Aalmat on the opposite side of the river.

Habitat description: Broad-leaved woodland covers much of the mountain but there are large areas of more open scrubby habitat and also bare rocky slopes. On the lower slopes, particularly on the north side, above the river, there are terraces with arable agriculture and orchards.

Conservation measures taken: Much of the mountain is now protected by a local NGO (The Association for the Protection of Jabal Moussa), which rents some of the land from the church, with other portions being owned by private landowners who are part of the NGO. Hunting, tree-felling and quarrying are banned on the land protected by this NGO.

Geographical Coordinates: 34°03.099'N, 35°45.914'E

Total area: 3787 ha

Habitat coverage: 40% Woodland, 40% Scrubland, 10% bare rock, 10% agriculture/cultivation, <1% artificial(buildings and quarries).

Threats: C (Critical), M (Major), L (Local)

L Level – Deliberate persecution of birds (hunting), Extraction industry (quarries), Tree-cutting.

7.2 Comments on observations at Jabal Moussa

The data from 2007 show that Jabal Moussa is a good site for soaring bird migration with 662 birds of 15 species seen passing over during the 7 visits in Spring and 1213 birds of 17 species during 8 visits in Autumn. Unfortunately the days of the visits did not coincide with any very large passages of soaring birds, although, due to logistical difficulties, no visits were carried out during the last two weeks of August, which is the peak period for migration of **European Honey-Buzzard**, which is one of the most numerous species passing through Lebanon.

Breeding birds locally include many of the common species which would be expected in this kind of habitat such as **Chukar**, **Black Redstart**, **Rock Nuthatch**, **Great Tit** and **Eurasian Jay**. The presence of 2 **Blue Tits** in all four seasons indicates that this species is a resident breeder here, which makes Jabal Moussa one of the most southerly sites for the species in Lebanon.

Jabal Moussa does not meet the criteria to qualify as an IBA (global or Middle-Eastern) based on this year's data. A follow-up project is now underway, funded by the Association for the Protection of Jabal Moussa and with fieldwork being done by A Rocha Lebanon, looking at the complete avifauna of the mountain at all seasons in 2008 (including bird-ringing, breeding bird surveys and further soaring bird studies) so it is hoped that after this project is complete we will be able to recommend the site as an IBA.

Number of species observed: 75

Number of visits: 17

Dates: 24th March, 9th April, 10th April, 30th April, 19th May, 20th May, 16th June, 7th September, 18th September, 19th September, 25th September, 2nd October, 10th October, 17th October, 24th October 2007, 16th January, 30th January 2008

Site 8. Jabal Aalmat

8.1 General Description:

This site is a mountain on the west side of the Mount Lebanon Range situated immediately north of the Nahr Ibrahim (Adonis River), and facing Jabal Moussa on the other side of the river. The land is used primarily for grazing by sheep and goats while agriculture in the form of fruit orchards is a significant secondary use. There is also wood-cutting of the remaining natural forests.

Habitat description: Mostly fairly rugged rocky terrain with scattered trees, but with patches of denser forest and flatter grassy areas. Also in places there are extensive terraces mostly under fruit trees. The natural forest areas appear to be mostly oak (*Quercus* spp) including both deciduous and evergreen species.

Conservation measures taken: none

Geographical Coordinates: 34° 06.122' N, 35° 48.160' E

Total area: 1714ha

Habitat coverage: 50% scrub/bush land, 30% wooded land, 10% bare rock, 10% agriculture/cultivation

Threats: C (Critical), M (Major), L (Local)

C level: Over-grazing/over-browsing.

M level: Deliberate persecution of birds, tree-cutting, quarrying

8.2 Comments on 2007 observations

This site proved to be somewhat disappointing in Spring and Summer. During the Spring passage only relatively small numbers of soaring birds were seen. This might partly be due to the large size of the site meaning that birds were spread out across a wide area making it difficult to count. Most of the species found breeding here were the common ones which would be expected in such a site, including **Long-legged Buzzard**, **Chukar**, **Black-eared Wheatear**, **Black Redstart**, **Sardinian Warbler**, **Western Rock Nuthatch** and **Great Tit**. Although some of these are Biome-restricted species, it is not enough to recommend the site for IBA status under criterion A3.

In the autumn most of the visits took the form of observations from a site on Jabal Moussa, to the south, looking north across the Adonis River to Jabal Aalmat, so that soaring birds migrating over Aalmat could be counted. However, although the Autumn passage was bigger than in the Spring, numbers were still very low, with only 233 raptors being counted over 5 visits in the Autumn.

Conversations with local shepherds indicated that other wildlife in the area includes Wolf (rare), Striped Hyaena, and Rock Hyrax, although none of these were seen during our visits. Evidence of Wild Boar and Porcupine was found.

Number of species observed: 48

Number of visits in 2007: 9

Dates: 20th March, 26th March, 17th April, 17th May, 8th September, 19th September, 25th September, 2nd October, 17th October.

Site 9. Nahr Ibrahim

9.1 General Description

This very large site is the entire valley of the Nahr Ibrahim (Adonis River) from its sources in the Mount Lebanon range of mountains, to the Mediterranean Sea between Jbail and Jounieh. For most of its length it takes the form of a fairly steep sided gorge with a narrow and fast-flowing river. In its upper reaches there is some more gently rolling terrain with arable agriculture but bare rocky crags and steep sided woodland are present all along the length of the valley.

Habitat description: Broad-leaved woodland, dominated by Oak (*Quercus*) species (both deciduous and evergreen), a fast-flowing river, and rocky crags are the most significant habitats here, but there are also some large areas of terraces, both under fruit trees and arable agriculture, in the upper reaches, while in the lower reaches, the narrow level strip on either side of the river is used for growing bananas.

Conservation measures taken: Although there are signs in the region of Adonis Village indicating the existence of “Nahr Ibrahim Protected Area”, for most of the length of the river there are apparently no effective conservation measures in force.

Geographical Coordinates: 34° 03.711' N, 35° 46.851' E

Total area: 4778ha

Habitat coverage: 50% broad-leaved woodland, 20% bare rock, c18% agriculture/ cultivation, 10% Scrubland, c2% Artificial (Buildings, quarries etc.)

Threats: C (Critical), M (Major), L (Local)

M level: Deliberate persecution of birds, tree-cutting, conversion to agriculture, quarrying.

9.2 Comments on 2007 observations

Although the Nahr Ibrahim Valley is one of the most beautiful areas in the whole of Lebanon, and for that reason alone would be worthy of protection, the birds observed during the visits in 2007 are not enough for it to qualify as an Important Bird Area under the criteria laid down by BirdLife International. The soaring-bird migration observed both in Spring and Autumn was relatively small, although the statement made above about Jabal Aalmat, that the size of the area might have made it hard to observe the passage, is even more likely to be true here.

Of the breeding birds, as well as many common woodland and scrub species, two species tied to upland rivers were seen – **Grey Wagtail** and **Dipper**. The **Dipper** in particular is of interest as the sub-species which occurs in Lebanon (*Cinclus cinclus rufiventris*) is not found anywhere else in the world. It was seen several times both on tributaries of the main river and in the river itself just below its source at the cave of Afqa.

One species which wasn't seen but which has been reported in previous winters from the cliffs around Afqa is the **Wallcreeper**. This scarce winter visitor to Lebanon may well occur elsewhere in the valley occasionally, as there is a large amount of suitable habitat for it.

Other wildlife observed during visits included freshwater crabs, and Persian Squirrels, while carnivores including Wolf, Jackal and Striped Hyaena are likely to occur here as they have been observed in the adjacent areas of Jabal Moussa and Jabal Aalmat

Number of species observed: 48

Number of visits in 2007: 10

Dates: 20th March, 9th April, 10th April, 1st May, 19th September, 25th September, 2nd October, 14th October, 17th October, 24th October

Site 10. Zibdeen

10.1 General Description

This site is a short valley situated just to the north of the lower part of the Adonis River and running parallel to it. It is heavily impacted by humans with human habitation and agriculture being the two most noticeable land-uses. The valley sides are mostly fairly gently sloping with no big areas of rocky crags.

Habitat description: Large areas heavily developed with housing and agriculture, particularly ‘poly-tunnels’. The remaining habitat is mostly broad-leaved woodland with some dry rocky scrubland.

Conservation measures taken: None.

Geographical Coordinates: 34° 05.974' N, 35° 42.974' E

Total area: 212ha

Habitat coverage: 45% artificial (buildings etc), 25% Woodland 15% Scrubland, 15% agriculture/ cultivation,

Threats: C (Critical), M (Major), L (Local)

C level: Building development, dumping of solid waste (garbage tipping)

M level: Deliberate persecution of birds (hunting), conversion to agriculture.

10.2 Comments on 2007 observations

Results from Zibdeen in 2007 were quite disappointing with virtually no soaring bird migration observed in the Spring and just one day in the Autumn where 307 Lesser Spotted Eagles were seen passing over but very little else. Breeding birds, both residents and summer visitors are restricted to very common species only, and passerine migration is affected by lack of much suitable cover and also the level of hunting. Although the number of species observed during the year seems quite high (74) most of these are represented by very low numbers.

Number of species observed: 74

Number of visits in 2007: 6

Dates: 7th March, 4th April, 24th April, 2nd May, 10th September, 10th October,

Site 11. Qadisha Valley

11.1 General Description

This site is made up of the upper part of the valley of the Qadisha River, stretching from the Cedars above Bcharre to about the village of Toula, and including the cliffs on both sides.

Habitat description: A deep gorge with steep rocky sides. The bottom of the gorge is a fast flowing river surrounded on both sides with mixed woodland, which also extends up the sides of the gorge where the slopes are not too steep. At the eastern end of the valley there is more open mountainous habitat and a single large stand of cedars (*Cedrus libani*), east of the town of Bcharre.

Conservation measures taken: Much of the land, particularly in the valley bottom is owned by the church and has restricted access and therefore some protection. However, hunting is apparently allowed here and it is difficult to assess how effective the protection is. The Cedar grove above Bcharre is a protected area with no hunting or other deleterious activities allowed.

Geographical Coordinates: 34° 16.068' N, 35° 58.796' E

Total area: 2144ha

Habitat coverage: 45% Scrubland, 45% woodland, 10% bare rock, <1% artificial (buildings etc)

Threats: C (Critical), M (Major), L (Local)

M level: Deliberate persecution of birds.

11.2 Comments on 2007 observations

As with the Nahr Ibrahim Valley this deep beautiful gorge is without question one of Lebanon's greatest natural treasures. However, its birdlife is limited to mostly common breeding species, although there are some specialist birds such as the **Dipper** on the river and **House Martins** nesting on the steep rocky crags. Soaring bird migration was low in both Spring and Autumn, possibly because of the high altitude of the site which might mean that most of the soaring birds pass further to the west.

Other wildlife seen during visits included Persian Squirrel, which was common in the eastern half of the site.

Number of species observed: 75

Number of visits in 2007: 6

Dates: 27th March, 16th April, 21st May, 12th September, 9th October, 30th October

Site 12 Jisr el-Qadi

12.1 General Description

The site is located in the Damour River Valley, on the northern side of the valley over-looking the old bridge which gives the site its name. The site slopes steeply down to the river and has a good view over the valley and the hills to the south.

Habitat description:

The main habitat surrounding the watch-point is coniferous (*Pinus* sp.) woodland interspersed with dense scrub. More open land can be seen to the south containing agricultural land, orchards and the village of Jisr-el-Qadi

Conservation measures taken: none

Geographical Coordinates: 33°43.560'N, 35°33.900'E

Total area: 282 ha

Habitat coverage: 50% Woodland , c18% Scrubland, 30% Agriculture/ cultivation, c2% Artificial

Threats: C (Critical), M (Major), L (Local)

Major level: Fire (several patches where pine woodland and scrub has been damaged by fire).

Local level: Garbage pollution,

12.2 Comments on observations at Jisr el-Qadi during 3rd year of the project

This site was one of the sites that was carried over from the second year of the project because of the interruption to the work caused by the war in 2006. Consequently visits were only carried out during the Autumn field season. However, bird numbers were very low in this season, as they had been in the spring, with only very small numbers of soaring birds being seen on passage. Consequently, this site does not satisfy the criteria for an Important Bird Area.

Number of species observed in 3rd year: 21

Number of species observed over both years : 41

Number of visits in 3nd year of project: 3

Dates: 11th September, 3rd October, 9th October 2007.

Site 13 Lower Damour River

13.1 General description:

This site is situated on the coast of Lebanon, around 15km south of Beirut and near the village of Damour, from which the river takes its name. It consists of the river and its corridor from the point where it passes under the main Beirut-Saida Highway, and stretching for 2-3km inland. On the north side of the river, the land slopes gradually up from the riverbank. The south bank is different, with a flat area of varying width (from 1m to c500m) which is bordered to the south by a steep escarpment, around 100m high. The river itself is also of varying width, but at its maximum is about 40-50m wide. There are several small islands, which, being made of gravel and medium-sized boulders, probably vary in their exact shape and location from year to year.

Habitat description: The north bank and the flat area to the south of the river are dominated by agriculture, with bananas, and fruit trees being the most abundant crops. These areas also have many patches of tall vegetation dominated by Giant Reed (*Arundo* sp.), and shorter weedy vegetation. The sides of the escarpment south of the river are mostly covered with young, scrubby woodland, which is replaced towards the river mouth by shorter scrub. There is also a low, more rounded hill projecting from the main escarpment, around 1.5km inland, which is covered with olive terraces. The margins of the river are mostly fringed with a thin line of Giant Reed. This species is also the most noticeable type of vegetation on the islands, which are otherwise almost bare.

Conservation measures taken: none

Geographical Coordinates: 33°42.240'N, 35°27.840'E

Total area: 142 ha

Habitat coverage: 50% agriculture/cultivation, 20% woodland, 15% scrub, 5% non-marine wetland, 5% Giant Reed, c4% open weedy ground, c1% bare rock/cliff.. <1% artificial (buildings).

Threats: C (Critical), M (Major), L (Local)

M Level, Toxic pollution (agricultural chemicals), Conversion to agriculture

L Level, Built development.

13.2 Comments on observations at Lower Damour River, during the 3rd year of the Project.

This was another of the sites which was carried over from the second year of the project due to the 2006 war in Lebanon. Three visits were carried out in the Autumn of 2007, completing the field-year. In addition, two extra visits were made in April 2007. The spring visits showed roughly the same picture as the previous year – that the site is good for passerine migration and particularly hirundines but that soaring birds do not pass through in large numbers. The picture in Autumn was very similar with small numbers of raptors passing through only. The river seemed to be slightly more attractive to waterbirds this year, with several **Common Kingfishers** and **Common Sandpipers** being seen and also a couple of **Eurasian Teal**, but not very large numbers.

Number of species observed in 3rd year: 29

Number of species observed over both years : 60

Number of visits in 3nd year of project: 5

Dates: 8th April, 23rd April, 26th September, 3rd October, 14th November 2007.