

Report on John Doe case

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1 Case Summary

The suspect Mr John Doe was suspected of bird watching and has been arrested in connection with child bird abuse. A search warrant was exercised at his home. The computer was seized to investigate the possible presence of inappropriate image of children birds.

As digital forensic investigators, We have been asked to perform a complete analysis of the hard drive of the laptop found at the suspect's home. This report highlights the evidence against Mr John Doe.

2 Forensic Acquisition & Exam Preparation

2.1 Acquisition

The police officers seized, during the raid, the computer of Mr John Doe. The computer, located on the suspect's desk, was powered off meaning that no potential informations were corrupted during the raid. The hard disk drive was removed from the computer, preventing any data from being modified. The hard drive was then send to the Forensic lab. A photograph shows the disk and the serial number which is **PCDOYJWJ541543**.

2.2 Preservation

A copy of the hard drive was made to perform all of the analysis to be sure to not corrupt the drive. The seized drive was copied to the workstation with the following procedure :

- 1. Attach the SATA cable to the drive
- 2. Attach the power cable to the drive
- 3. Turn on the power
- 4. Connect USB cable to workstation

Photographs of the attachment to the workstation can be seen in *Appendices 2*.

Our team then made a copy of the content of hard disk drive on the workstation. To perform a safe copy and to be sure that the copied version was not altered, Our investigators have checked both MD5 checksum of the real hard disk drive and the copy. An MD5 checksum is a 32-character hexadecimal number that is computed on a file. If two files have the same MD5 checksum value, then there is a high probability that the two files are the same. Both of the copy and the real drive had MD5 sum of :

d63dd1b8917ca28bac7c955fc3b6cd25

It means that the copy that we have on our workstation is not altered. We can now perform our investigation on the copy of the hard disk drive.

2.3 Antivirus scan

A malware was found on the suspect's drive when an antivirus scan was performed. ClamAV found a malware called : **realplay.exe**. The screenshot of the scan can be seen in *Appendices 5.1 and 5.2*. This malware could interfere with our results but by analysing the file, we know that the malware was on the computer since 2005. But most of the proofs against the suspect were on the drive since 2004. There is no correlation between bird pictures and the malware.

2.4 Disk Overview

The disk is partitioned in 3 parts. Thanks to the line command **mmls** that we performed on the disk, we know that there is a NTFS/exFAT formatted partition (**Vol.2**) of 6136767 bytes and an unallocated one of 5118498 bytes (**Vol.3**).

A lot of indecent files of birds were found on the unallocated space. Meaning that the suspect wanted to hide incriminating proofs.

Three differents account were also found. They are named : **bob**, **jane**, **johndoe**. It means that several people could have access to the computer to create such indecent files. But all bird files were found on the suspect session.

3 Findings and Report

3.1 Image files

By carving the hard disk drive with the tool **foremost**, we found numerous picture of bird related pic. Those pictures were found with the tool foremost. This tool does not recover the name of the pictures. So in this report the pictures are only named by the number of the figure.

- 56 bird related pictures don't have meta datas. They can be seen in *Appendices 5.3.1*
- 43 pictures were taken with a **Canon PowerShot SD100**. All of those pictures were taken between the 13/06/2020 and the 27/06/2020. On those pictures we can see several people, it may be a group trip which aims to take some pictures of birds. It could be John Doe's partners in crime. Pictures can be seen in *Appendices 5.3.2*.
- 1 picture was taken with a **Canon EOS-1DS** on the 29th of January 2003. The picture was found in the unallocated space of the memory (vol 3.). It can be also seen in *Appendices 5.3.3*.
- 1 picture was created with **Adobe Photoshop CS Windows** on the 13th of July 2004. It can be also seen in *Appendices 5.3.4*.

Another file was concealed under a **.exe** file. **FantailFrontView.exe** was in fact a picture of a bird. This picture could be identified thanks to the header of the file. Every type of file has a specific header, here the file's header did not match the header of **.exe** file

but matched a **.jpg** file. *Appendices 5.3.5*

A picture of a bird was also found on file called **Doc1.doc**. This file is Microsoft Word Document. The file contains half an image of a bird. The file can be seen in *Appendices 5.3.6*.

Several pictures were also found by the software autopsy. Those pictures don't match their extension. 9 pictures have the extension **_j_p_g_**. It means that Mr John Doe wanted to conceal them. John Doe knew that having those kind of files is forbidden. You can see the list in *Appendices 5.3.7*.

Moreover Autopsy shows us the event that occurred on the disk. The file is called **events.db** (The file is not in the appendice because it's too large). In the event file, if we search for the events that occurred on the **Vol3** we found several creation of picture with bird related names. (*Appendices 5.3.8*). This shows once again that the suspect knew what he was doing.

3.2 Audio files

Only one audio file was found. It's named **aggressive_song.wav**. This song is 8 seconds long. It is a whistle of a bird. This file was found in the **MSN** folder, meaning that the suspect received the file from someone or he shared it.

3.3 Text files

Two text files are related to the birds on John Doe's computer. They were located on C: (vol 2.).

The first one is called **nestboxtips.txt**. It's a text file on how to have the best nest for birds. The full text is in *Appendices 5.4.1*.

The second one is called **Birdwatching.doc**. This file is a guide to be the perfect bird watcher. It gives a lot of tips on to see birds, identify them. This file seems to come from the The Bird Conservation Society of Thailand (BCST). *Appendices 5.4.2*

3.4 Web files

Two web files : **ostbk2b.htm** and **aa010703a.htm** were found at the path : **C:/Documents and Settings/johndoe/My Documents**. Those two files are related to two different websites that are birds related. Those proofs show that there is a network of bird watcher among the internet. Both website can be seen in the *Appendices 5.5.1 and 5.5.2*

3.5 Inbox Email

John Doe appears to be using Thunderbird with the email account : **jdoue@example.com**. We found in **C:/Documents and Settings/johndoe/Application/Data/Thunderbird/Profiles/8jiqrt8v.default/Mail/Local Folders/Inbox** 4 emails received the 9 Feb 2005.

3 of them are from Ben Forbes <ben@example.org> and contain 8 images of birds, all with a bird oriented subject and message. One of the message is “Thanks for the pics you send me, here are some I really like”, which supposes that John Doe have also distributed some bird related content to other persons.

The other email is from Bird Fanciers <mailinglist@birds.example.com> entitled “How to identify bird”.

3.6 Registry Analysis

There are 4 accounts in the registry : Administrator (ADMIN but never logged in according to the SAM file informations), bob, jane and johndoe (ADMIN). *Appendices 5.7.1*

In Bob’s ntuser.dat we found that Bob accessed the file : “Dear Fred.doc” which appears to be a mail or letter to a friend just asking him for news. Bob has a user’s typedURL key for <http://www.microsoft.com/isapi/redir.dll?prd=ie&pver=6&ar=msnhome> but there is no user Windows Live Messenger GUIDs and the contact database is not in the registry. In Jane’s ntuser.dat we found nothing.

In ntuserdat of john doe we found a lot of things : Most recent PDF opened in adobe acrobat reader on Wed Feb 2 21:25:10 2005: E/birds/non images/BirdingGuide.pdf

Recent opened/saved Programs/Files/URLs MRU (MRU is the abbreviation for most-recently-used) in Software/Microsoft/Windows/CurrentVersion/Explorer/ComDlg32 :

- C:/Documents and Settings/johndoe/My Documents/birdpics (folder)
- C:/Documents and Settings/johndoe/My Documents/birds.zip
- C:/Documents and Settings/bob/My Documents/My Music/ready2fledge.jpg
- C:/Documents and Settings/johndoe/My Documents/newbies2.jpg
- C:/Documents and Settings/johndoe/My Documents/My Pictures/chicks2.jpg
- C:/Documents and Settings/johndoe/Desktop/birdtrans2.jpg
- C:/Documents and Settings/johndoe/My Documents/ostbk2b2.htm
- C:/Documents and Settings/johndoe/My Documents/My Pictures/177.jpg
- C:/Documents and Settings/johndoe/My Documents/My Pictures/babyscot_2weeks1.jpg
- C:/Documents and Settings/johndoe/My Documents/My Pictures/babyscot_vyoung.jpg
- E:/birds/audio/aggressive_song.wav
- C:/Documents and Settings/johndoe/Desktop/AdbeRdr70_enu_full.exe
- C:/Documents and Settings/johndoe/My Documents/aa010703a.htm
- C:/Documents and Settings/johndoe/My Documents/My Pictures/40m.jpg

- C:/Documents and Settings/johndoe/My Documents/My Pictures/wbpremium_s.jpg
- C:/Documents and Settings/johndoe/My Documents/My Pictures/7107298.jpg
- C:/Documents and Settings/johndoe/My Documents/kakapo.ram
- C:/Documents and Settings/johndoe/My Documents/nestboxtips.txt
- C:/Documents and Settings/johndoe/My Documents/birds.zip

An other similar registry key is the user's recent docs key : "Software/Microsoft/Windows/CurrentVersion/Explorer/RecentDocs" that gives us these filenames (those with no extensions are folders) :

- 38 = New Volume (F:)
- 11 = AlmondMarshGreatBlueHeronStalling.jpg
- 37 = MSN
- 18 = aggressive_song.wav
- 36 = stuf.doc
- 35 = birds.zip
- 34 = WINDOWS
- 33 = ODBC.INI
- 14 = non images
- 13 = BirdingGuide.pdf
- 32 = BookList.doc
- 21 = Local Disk (C:)
- 5 = birdwatching.doc
- 31 = My Music
- 3 = ready2fledge.jpg
- 2 = newbies2.jpg
- 1 = My Pictures
- 0 = chicks2.jpg
- 30 = birdtrans2.jpg
- 29 = ostbk2b2.htm

- 28 = 177.jpg
- 27 = babyscot_2weeks1.jpg
- 26 = babyscot_vyoung.jpg
- 25 = birds
- 24 = Killdeer.jpg
- 23 = Sample Music
- 22 = Doc1.doc
- 20 = EvanstonWoodpecker.jpg
- 19 = audio
- 17 = bookmarks.html
- 15 = cookies.txt
- 12 = kakapo.ram
- 10 = Q3 Thread (Statechart).gif
- 9 = Prac4
- 8 = Prac4.gif
- 6 = nestboxtips.txt
- 4 = aa010703a.htm

As the others accounts : Software/Microsoft/Windows Live Contacts/Database was not found. As well as there is nothing inside the entries related to the mailing microsoft software called Outlook. In fact, the default Mail client key gives us Mozilla Thunderbird as default mail software and we also found the email address (jdoe@example.com) and the thunderbird Profile files (C:/Documents and Settings/johndoe/Application Data/Thunderbird/Profiles/8jiqrt8v.default) in the registry.

Another interesting thing, in Software/RealNetworks/RealPlayer/6.0/Preferences we found the most recently opened clips in RealPlayer (the media & video player that appears to be a virus according to the virus scan) :

```
MostRecentClips1 -> aggressive_song | file://C:/Program
                    Files/MSN/aggressive_song.wav
MostRecentClips2 -> The Life of Birds: Dawn Bird |
file://C:/DOCUME 1/JOHNDOE/LOCALS 1/TEMP/dawn.ram
```

The wallpaper MRU entries

“Software/Microsoft/Windows/CurrentVersion/Explorer/Wallpaper/MRU” contains 42 pictures and 5 of them are bird related :

- 38 -> C:/Documents and Settings/johndoe/My Documents/ My Pictures/wbpremium_s.jpg
- 37 -> C:/Documents and Settings/johndoe/My Documents/ My Pictures/tn_duck_3.jpg
- 36 -> C:/Documents and Settings/johndoe/My Documents/ My Pictures/snow_geese.jpg
- 35 -> C:/Documents and Settings/johndoe/My Documents/ My Pictures/7107298.jpg
- 34 -> C:/Documents and Settings/johndoe/My Documents /My Pictures/40m.jpg

In the System registry file we have the list of devices that were plugged in the computer and contains files with related bird content according to some accessed path and filename in history & registry :

- CdRomSONY_CDU4811 known as D:,
- DiskFUJITSU_MPF3153AT,
- DiskMaxtor_90576D4,
- A Generic floppy drive known as A: (maybe one of the two precedently mentioned drives)
- Disk&Ven_&Prod_USB_DISK&Rev_1.05 with a serial number : 071A190F01DF&0 known as E:

3.7 Browser history

We found that John Doe uses 2 web browsers from which we can retrieve the bookmarks, history, cache & cookies : C:/Program Files/Mozilla Firefox/firefox.exe C:/Program Files/Internet Explorer/iexplore.exe

From IE we found 79 different entries in the history that were accessed between the 01/24/2005 and the 02/09/2005, 0 online bird related site but 33 indecent file accessed. (See in *Appendices*)

Some filenames such as aggressive_song.wav appears to be present on different devices E: and C: which can be an evidence to the fact that indecent files were intentionally shared between multiple devices.

From Firefox, we found in the history 163 http links of which at least 65 are bird related websites (see in annexe). There is a bookmark.html file which contains 3 indecent links :

- Free Bird Wallpaper - Bald Eagle Albatross Owl Falcon 1024x768
- Alphabetical Index of Birds
- Chickadee Karaoke

In the cookies.txt from Firefox we found website cookies for www.haiths.com which is a bird food selling website, http://www.relmastop.com/Animals/Birds/ a site counter, from http://birding.about.com a birding and bird watching website where he downloaded an htm file about how to build a bluebird nestbox http://birding.about.com/library/weekly/aa010703a.htm (this file is in C:/Documents and Settings/johndoe/My Documents/aa010703a.htm) Moreover the downloads history give us a lot of indecent files downloaded by John Doe from different websites :

- "http://www.traveltex.com/downloads/screensavers/birds.zip"
- "http://freespace.virgin.net/cobber.budgies/images/babyscot_2weeks1.jpg"
- "http://people.cornell.edu/pages/sah67/ready2fledge.jpg"
- "http://people.cornell.edu/pages/sah67/birdtrans2.jpg"
- "http://www.insaneanimals.com/items/177.jpg"
- "http://www.pbs.org/lifeofbirds/songs/dawn.ram" (Seen in recently opened files of Real Player in registry)
- "http://freespace.virgin.net/cobber.budgies/images/babyscot_vyoung.jpg"
- "http://whyfiles.org/shorties/104chick_sex/images/aggressive_song.wav"

- "http://www.cvm.okstate.edu/instruction/kocan/ostrich/ostbk2b2.htm"
- "http://people.cornell.edu/pages/sah67/newbies2.jpg"
- "http://people.cornell.edu/pages/sah67/chicks2.jpg"

There are more informations about these downloads in the section “Firefox download history” of the annexe.

We now know the weird file AdbeRdr70_enu_full.exe came from a bad website ardownload.adobe.com and not adobe.com so it's very likely to be a virus despite the fact that the scan didn't give us this result.

3.8 PDF Files

By carving the hard disk drive with the tool foremost, we found three pdf documents related to birds.

There is a birding guide, a newsletter from University of California which show some birds spotted at the University of California Botanical Garden and a presentation of different birding sites around Perth (Perth is a city of western Australia).

Those different files are too large to be included in this report, however there are previews of each document in *Appendices 5.8*.

3.9 GPG Files

An gpg file was discovered in "Documents and Settings/johndoe/My documents". This file was protected with both a public/private keypair and a password. The public/private keypair were in "Documents and Settings/johndoe/Application/GnuPG" and we use "John The Ripper" tool to brute-force the password. The password was "arran".

There was a zip file containing 5 illegal images. It's in *Appendices 5.9*.

3.10 Timeline of the events

With the evidences found on the suspect's computer we can recreate the different illegal moments of Mr John Doe activity.

3.10.1 2003:01:29 16:14:10

This is the oldest bird related thing that we can recover from John Doe hard disk drive. This is probably when the suspect discovered a passion for birds. This is the picture from the **Canon EOS-1DS Camera**.

3.10.2 Between 13/06/2020 and 27/06/2020

This is the second episode of John Doe's deviant passion. The 43 pictures taken with **Canon PowerShot SD100**. Those pictures are probably a trip to observe birds. We can suppose that the different persons on those pictures are Mr John Doe partners in crimes.

3.10.3 02/02/2005 and 03/02/2005

Between those two days John Doe downloaded and consulted several bird related documents. The documents and the dates are :

- Wed. 02 feb. 2005 15:26:01 CET (aa010703a.htm)
- Wed. 02 feb. 2005 15:29:30 CET (nestboxtips.txt)
- Wed. 02 feb. 2005 17:25:10 CET (birdwatching.doc)
- Wed. 02 feb. 2005 17:25:10 CET (FantailFrontView.exe)
- Wed. 02 feb. 2005 17:46:32 CET (birdpics.gpg)
- Thu. 03 feb. 2005 13:23:00 CET (aggressive_song.wav)
- Thu. 03 feb. 2005 15:17:43 CET (Doc1.doc)

3.10.4 09/02/2005

All of the 4 emails were received on this date. The suspect seems to have found a partner in crime to share bird related pictures. This is probably after visiting the bird website 7 days before.

3.10.5 Global Timeline

Autopsy gave us the global timeline of the activity of the hard disk drive. It shows that the computer is from 1970. But the first activities began in the early 2000's. The global timeline can be seen in *Appendices 5.10*.

4 Conclusion

101 pictures of birds, 1 audio file, 2 text files, 2 Web Files, 4 Emails, more than 65 websites link/URL that are bird related were found on the suspect computer. Moreover some files were deliberately hidden, by changing extension name, encrypting them, hiding them in an unallocated partition etc..This means that the suspect knew that those kinds of files were illegal. Furthermore a lot of files, like Emails and group photo of a trip, show that John Doe was not acting alone. We can assume that the suspect shared this illicite passion to several partner in crimes.

A virus was found on the hard disk drive. It can be possible that this virus downloaded some bird related things on Mr. John Doe's computer. But every file was found before 2005 which the date of birth of the malware on Doe's computer. This means that the malware is not responsible of all this.

5 Appendices

5.1 Acquisition and Preservation



Figure 1: Hard disk drive of the suspect

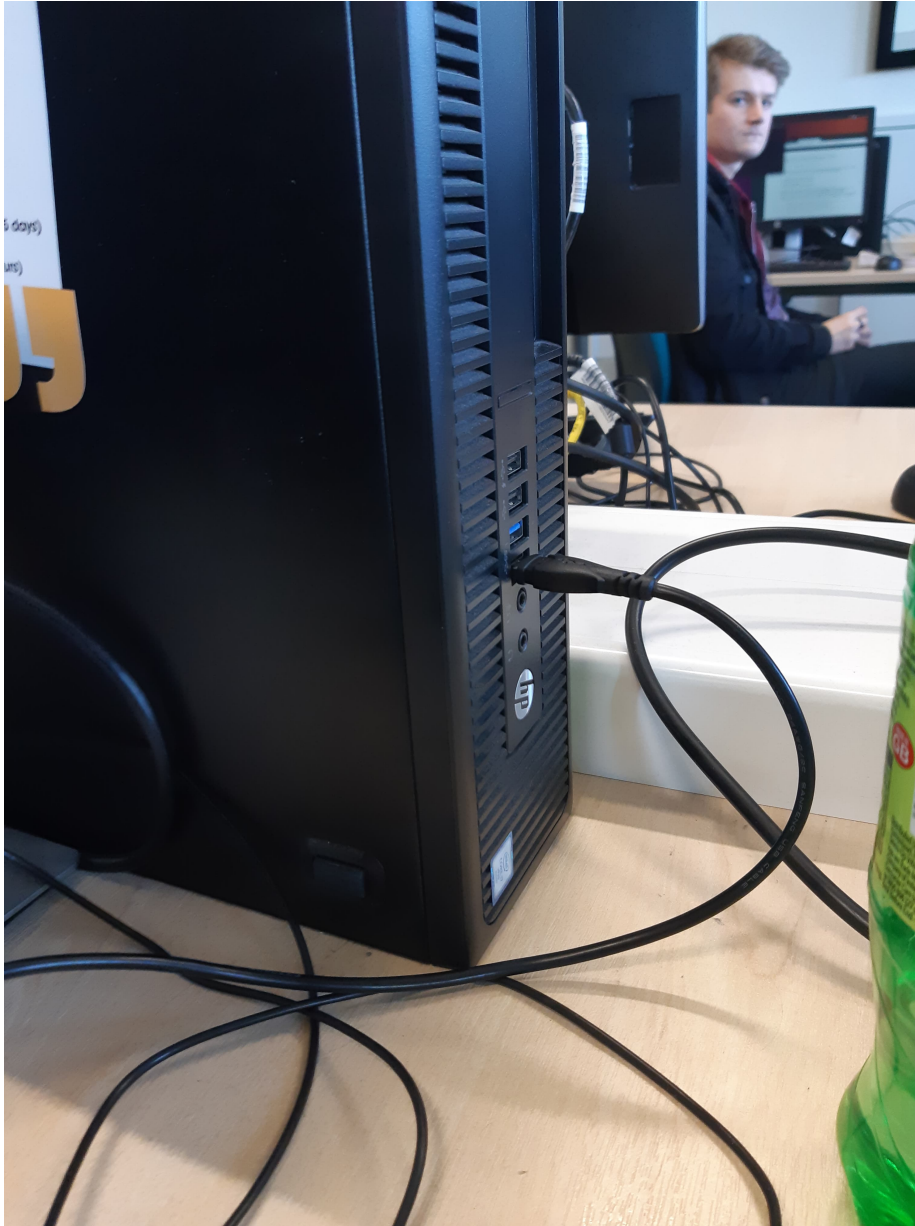


Figure 2: Connection to the workstation

5.2 Antivirus Scan

```
/mnt/suspectDrive/Program Files/Real/RealPlayer/realplay.exe: Win.Trojan.Tufik-100  
FOUND
```

```
----- SCAN SUMMARY -----
```

```
Known viruses: 6761063  
Engine version: 0.102.2  
Scanned directories: 1431  
Scanned files: 15666  
Infected files: 1  
Data scanned: 2577.73 MB  
Data read: 2926.50 MB (ratio 0.88:1)  
Time: 2174.672 sec (36 m 14 s)
```

```
trojan info
```

```
admin@H44:~/Desktop$ sudo ls -lisanh /mnt/suspectDrive/Program\  
Files/Real/RealPlayer/realplay.exe  
16203 204K -rwxrwxrwx 1 0 0 201K Feb  2  2005 /mnt/suspectDrive/Program  
Files/Real/RealPlayer/realplay.exe
```

Figure 3: ClamAV Scan

5.3 Image Files

5.3.1 Miscellaneous Image files



Figure 4

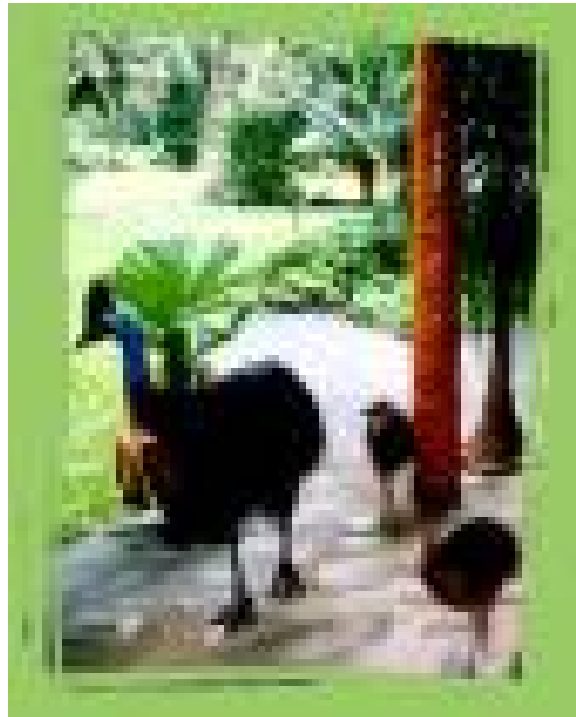


Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10

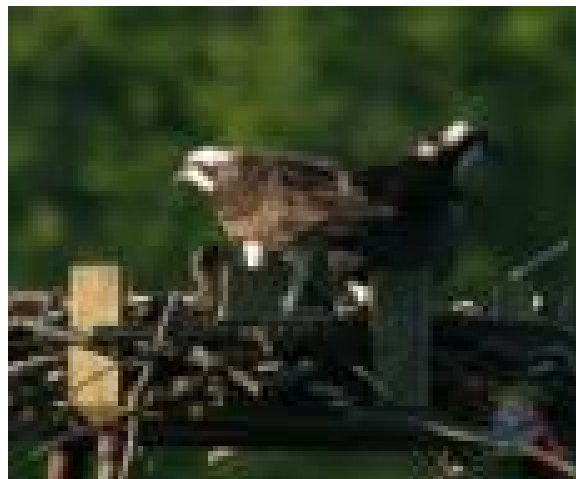


Figure 11



Figure 12



Figure 13



Figure 14



Figure 15

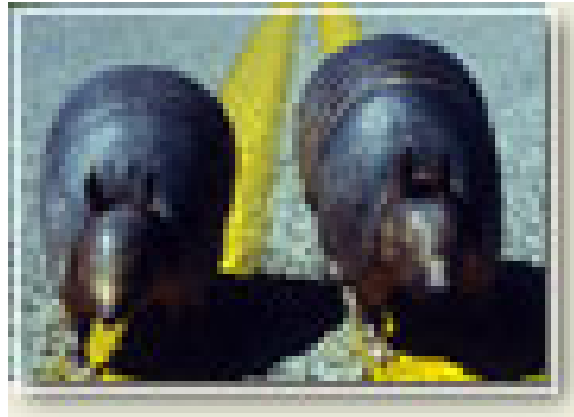


Figure 16



Figure 17



Figure 18



Figure 19



Figure 20



Figure 21

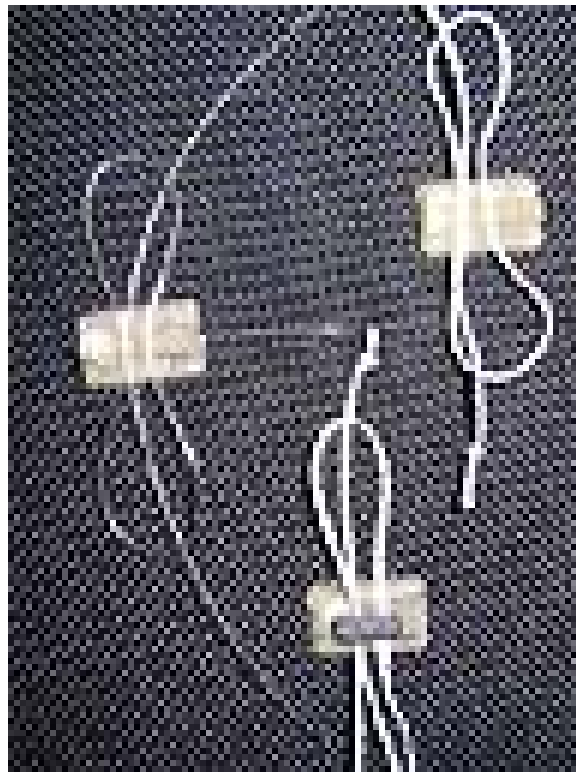


Figure 22



Figure 23



Figure 24



Figure 25



Figure 26



Figure 27



Figure 28

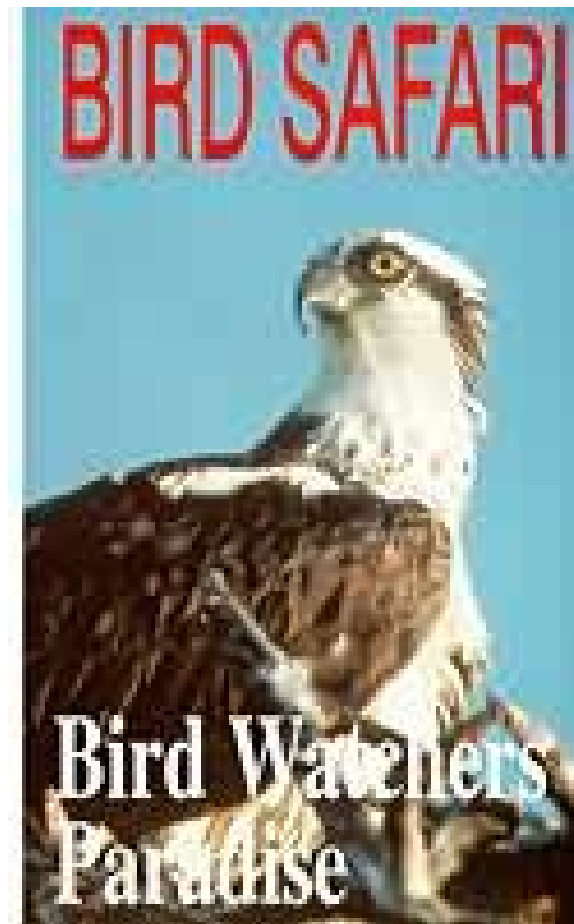


Figure 29



Figure 30



Figure 31

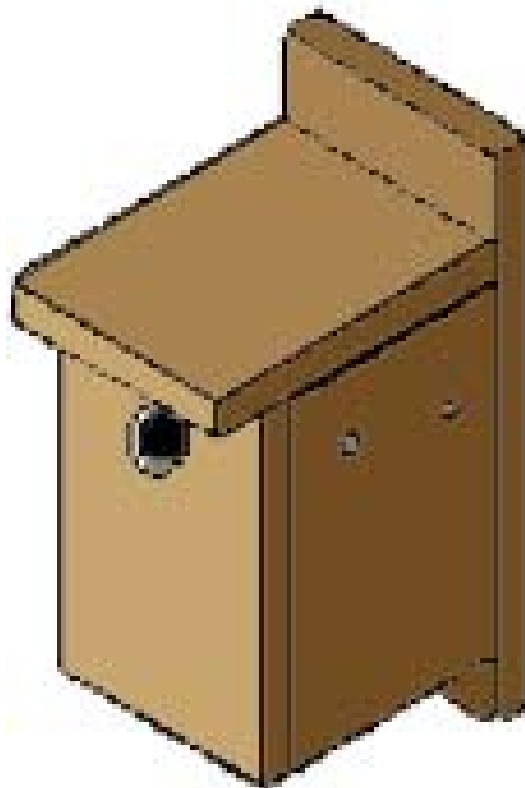


Figure 32



Figure 33



Figure 34



Figure 35



Figure 36



Figure 37



Figure 38



Figure 39



Figure 40



Figure 41



Figure 42



Figure 43



Figure 44



Figure 45



Figure 46



Figure 47



Figure 48



Figure 49



Figure 50



Figure 51



Figure 52



Figure 53



Figure 54

5.3.2 Canon PowerShot SD100 Images



Figure 55



Figure 56



Figure 57



Figure 58



Figure 59



Figure 60



Figure 61



Figure 62



Figure 63



Figure 64



Figure 65



Figure 66



Figure 67



Figure 68



Figure 69



Figure 70



Figure 71



Figure 72



Figure 73



Figure 74



Figure 75



Figure 76



Figure 77



Figure 78



Figure 79



Figure 80



Figure 81

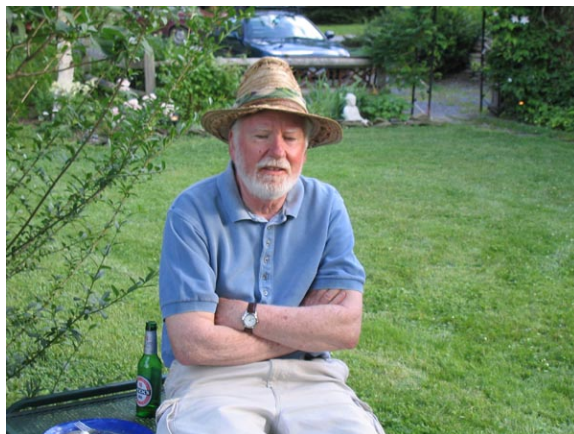


Figure 82



Figure 83

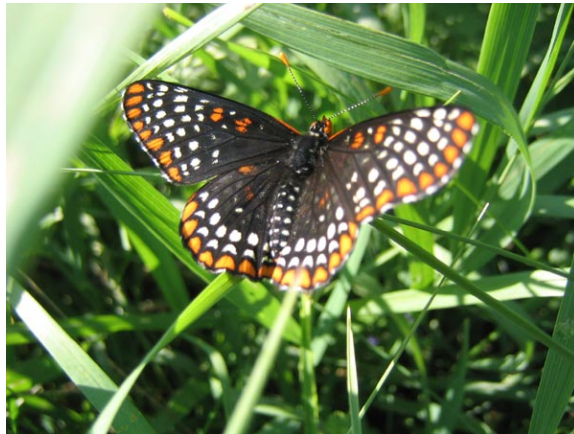


Figure 84



Figure 85



Figure 86



Figure 87



Figure 88



Figure 89



Figure 90



Figure 91



Figure 92



Figure 93



Figure 94



Figure 95



Figure 96



Figure 97

5.3.3 Canon EOS-1DS Image



Figure 98

5.3.4 Adobe Photoshop CS Windows Image



Figure 99

5.3.5 FantailFrontView



Figure 100

5.3.6 Doc1.doc

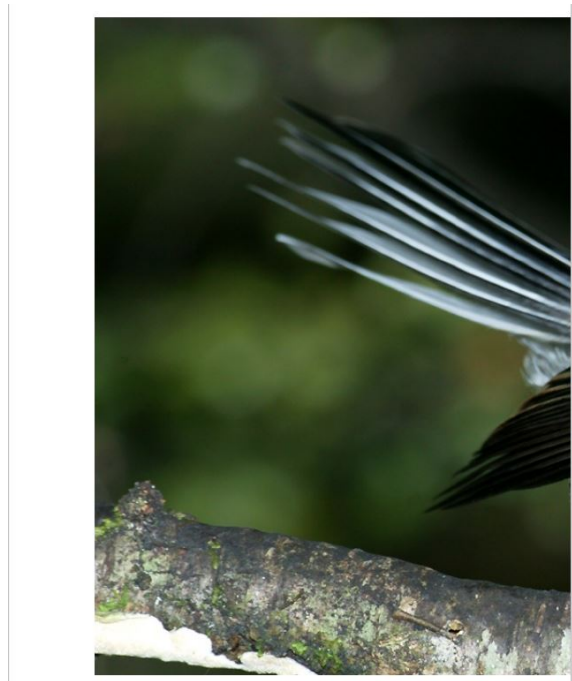


Figure 101

5.3.7 _j_p_g_ files

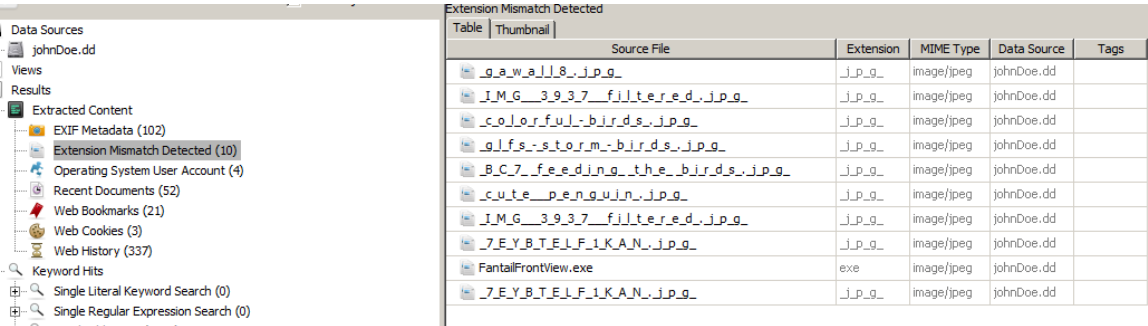


Figure 102

5.3.8 Vol3 files

```

71245|1|32059||1107361510|1|0|/img_johnDoe.dd/vol_vol3/AlmondMarshGreatBlueHeronStalling.jpg|/img_johnDoe.dd/vol_vol3//img_johnDoe.dd/vol_vol3/|0|0|0
71246|1|32059||1107968788|2|0|/img_johnDoe.dd/vol_vol3/AlmondMarshGreatBlueHeronStalling.jpg|/img_johnDoe.dd/vol_vol3//img_johnDoe.dd/vol_vol3/|0|0|0
71247|1|32059||1107430938|3|0|/img_johnDoe.dd/vol_vol3/AlmondMarshGreatBlueHeronStalling.jpg|/img_johnDoe.dd/vol_vol3//img_johnDoe.dd/vol_vol3/|0|0|0
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```

Figure 103

5.4 Text files

5.4.1 Nestboxtips.txt

```
Tips for Nest Boxes this spring/summer

If you have old boxes in your garden, clean out any of last years nesting material or any old bits of
food that may have been stored in there.

If you are putting up new nest boxes make sure that they are out of the reach of cats and Squirrels.

Check that the box isn't in full sun otherwise young birds may literally bake in the heat.

Experiment with different kinds of bird boxes the open-fronted Robin boxes may even attract
Spotted Flycatchers.

Make sure any boxes are at least 15mm in thickness.

Face boxes away from prevailing winds.

Don't put nest boxes too close together in a small area as this will only lead to territorial fights.

Always make sure that there is enough food and fresh water made available close by.

Do not put bird boxes with perches attached the birds do not need them and it may only invite
predators.

Never buy a bird table with a nest box built in, as nesting birds will only come into conflict with
feeding ones.
```

Figure 104

5.4.2 Birdwatching.doc

BIRDWATCHING IN THAILAND

Feathered Magic from Mangroves to Mountaintops by Antony Lynam

One of the great attractions for nature tourists visiting Thailand is the diversity of environments extending across mountain peaks, lowland rainforests, mangroves, coral reefs, farmland and urban jungles. Within a day, or even a few hours travel, one can easily make the transition between these places and witness natural marvels large and small.

For wildlife enthusiasts no group maintains interest and pleasure more than birds. While special efforts are required to see in the wild charismatic species such as elephants and primates, birds are found across the entire spectrum of environments from pristine to severely degraded areas.

Part of the attraction for birds lies in their diversity. Nine hundred and seventy eight bird species have been recorded in Thailand, approximately 10% of the world's total. At the Isthmus of Kra between latitudes 11° and 13°N, a major biogeographic transition between Indochinese and Sundaic forests produces a special diversity of birds with a total of 152 species of birds reaching the northern or southern range limits of their geographic ranges.

Two-thirds of Thai birds are residents, the remainder are seasonal visitors. Locations where migrants congregate, often in large numbers, are highly accessible making Thailand a special destination for birdwatchers.

Many birds are susceptible to human disturbance because they have small geographic ranges, a result of specific habitat requirements. For example, Deignan's babbler - a non-descript forest bird is found on Doi Chiang Dao and nowhere else in the world. Gurney's pitta are only found in lowland rainforests. Fewer than 30 birds remain in the last known population in Thailand at Khao Nor Chuchi, Krabi. Efforts by local and international conservation agencies strive to increase protection efforts and reforest areas encroached by rubber farmers, though time is running out. With approximately 20% of the birds found in Thailand being globally or regionally endangered species, this makes the country a birdwatching haven for bird enthusiasts.

IDENTIFYING BIRDS

Birds are distinguished first by their size and shape. They range from diminutive flowerpeckers, sunbirds and white-eyes, about the size of your index finger, to lanky storks and egrets that stand almost a metre tall, and Green peafowl with its spectacular 2m tail. The form of the beak offers vital clues about the bird's diet. For example a thin curved tube for sipping nectar or a sharp hook for tearing flesh. The pattern and colour of plumage can tell apart the sexes as in pheasants where males are bright and striking, and females are drab and dowdy. By far the most useful character for identification is a bird's voice. This is especially true in forests where on average 90% of birds are hidden from view. The most experienced birdwatchers in the tropics know their songs and calls.

BEST TIMES TO SEE BIRDS

The nesting season is a good time to be watching birds. During this most active time in a bird's life a variety of vocalizations and behaviours are exhibited. In Thailand, as in other tropical countries, the nesting season coincides with the period when food is in abundant supply. A bird expends much energy in courting, mating, incubating eggs, defending a nest and feeding offspring. Most birds nest during the transition between dry and wet seasons when new leaves and grass shoots sprout. This occurs from February to June. Certain birds depend on the availability of water and nest throughout the rainy season.

Figure 105

Migrants are best observed during their passage into or out of the country, or as they pass through on their way to other places. Most conspicuously, half a million ducks spend their winter in Thailand, feeding and resting in watery roosts from Chiang Saen to Thale Noi. Thousands of garganey and Lesser treeduck flock during January and February.

Shorebirds like sandpipers, stints and plovers migrate long-distances between nesting grounds in Eurasia and tropical Asia and wintering grounds in Australasia. They stop to feed in Thailand's mudflats and mangroves during September to May where they stock up on invertebrates and crustaceans. During October, the southward migration of hawks over peninsular Thailand is an avian spectacle. Chinese goshawks, Japanese sparrowhawks, crested honey buzzards, black bazas, and others are seen coasting on thermals in their thousands daily. Less conspicuous is the blue-winged pitta, a ground dwelling bird that arrives with the rains to nest in deciduous and bamboo forests, and escapes the hot season for the wetter forests of Malaysia and Sumatra.

WHERE TO FIND BIRDS

Given that many birds are denizens of certain times, places, habitats or seasons, the amateur naturalist can remember them by association.

PARKS, TEMPLES AND GARDENS

Some species like barn swallows, magpie robins, mynas and starlings can be found around Bangkok and environs. *Lumphini Park*, a heavily-used green area in the city centre supports a variety of birds with over 90 species having been recorded there. Temples near Bangkok and Ayutthaya preserve pockets of the natural landscape including birds such as black kites, parakeets and woodland birds that are characteristic of the habitats.

RICE PADDIES, MARSHES AND PONDS

Rice paddies, marshes and ponds away from built-up areas support breeding populations of Asian openbill stork and many other waterbirds.
Key sites: *Suphan Buri-Ayutthaya* and *Beung Boraphet*.

PEAT SWAMP FORESTS

Almost the last vestige of Thailand's peat swamp forest at *Phru To Daeng* or *Chalerm Phrakiat Wildlife Sanctuary* in Narathiwat supports Lesser adjutants, a kind of stork, along with several birds characteristic of Sundaic forests.

LAKES, RIVER SANDBANKS AND REEDBEDS

Lakes, river sandbanks and reedbeds preserve unique assemblages of wintering waterfowl and perching birds.
Key sites: *Chiang Saen*, *Fang Hot Springs*, and *Thaton*.

AGRICULTURAL LANDSCAPES

Agricultural landscapes across the country support species that tolerate human presence and include kites, rollers, bee-eaters, coucals, weavers and bulbuls.

SANDY BEACHES, MANGROVE AND TIDAL FLATS

Sandy beaches are attractive to tourists but are barren habitats for birds, while little-visited mangroves and tidal flats that are rich in nutrients and microorganisms, are favoured feeding haunts for migrant waders. Some birds like the Brown-winged kingfisher and Mangrove pitta, are entirely restricted to mangroves while Mangrove whistlers and flyeaters rarely leave the area.
Key sites: *Samut Sakhon*, *Ban Laem* in *Petchburi*, and *Krabi*.

OFFSHORE ISLANDS

Offshore islands such as *Phi Phi*, *Libong*, *Surin* and the *Similans* support fewer

Figure 106

species than similar sized mainland habitats but some such as Nicobar and Pied Imperial pigeon are entirely restricted to these refuges.

SEASCAPES

While there are fewer seabirds in the warm Thai waters compared with those in the northern and southern hemispheres, frigate birds, skuas, boobies, and terns are among the rewards for marine birders.

FORESTS

Most resident Thai birds depend upon forests for their survival. Rainforests in the extreme south support the greatest avian diversity, while seasonally dry dipterocarp, mixed deciduous and evergreen forests in the centre and north. Key sites: *Khao Yai National Park, Kaeng Krachan National Park, Khao Soi Dao, Nam Nao National Park, Khao Nor Chuchi, Ban Nai Chong, and Hala Bala Wildlife Sanctuary.*

MOUNTAINS

Sibias, minlas, and laughing thrushes are relatives of species found in the Himalayas and southern China, and can only be found in mountain forests. Following surveys of high mountain peaks in the last decade, at least 20 new species or 2% of the total have been added to the lists for Thailand. Key sites: *Doi Pha Hom Pok, Doi Chiang Dao, Doi Inthanon, Doi Ang Khang, and Doi Suthep.*

By visiting these enchanting destinations, travellers can appreciate the avian wonders that Thailand offers and better understand the importance of the wild and not so wild areas that preserve them.

Contact information:

Bird Conservation Society of Thailand (BCST)*
69/12 Soi Ramindra 24, Jorakaebau, Ladprao, Bangkok 10230, Thailand
Email: bcst@box1.a-net.net.th
Tel: 66-(0)-2943-5965
Web sites:
www.bcst.org/index_ebird.html
www.thai.net/bcst

* The Bird Conservation Society of Thailand (BCST) is a BirdLife Partner

Oriental Bird Club (OBC)
c/o Uthai Treesucon, 723/1 Mu 2 Soi Ram Intra, Jorakhaebua, Bangkok 10230.
E-mail:
utree@loxinfo.co.th
mail@orientalbirdclub.org
Web site: www.orientalbirdclub.org

Wildlife Conservation Society - Thailand Programme
P.O. Box 170, Laksi, Bangkok 10210
Tel: +662-503 4478, +662-503 4479
Fax: +662-503 4096
Email: thailand@wcs.org

Reference information:

Field guide
Robson, C. 2002.
A field guide to the birds of Thailand.
Asia Books, Bangkok. 272pp.

Figure 107

TAT PUBLICATIONS ON NATURE TOURISM

For more information on birdwatching in Thailand, please refer to the following nature tourism guide books in the "National Park" series published by the Tourism Authority of Thailand as part of the Tourism and Employment Creation Plan implemented under the Social Investment Project.

- KHAO YAI: DONG PHAYA YEN FOREST RANGE
ISBN 974-8252-70-1
- KAENG KRACHAN:
Amazing Forest of Phetchburi River
ISBN 974-8252-72-8
- KHAO SOK
Fascinating Limestone Mountains Amid The Verdant Forest of Surat Thani, Thailand
ISBN 974-679-099-4
- DOI INTANON - DOI SUTHEP
The Himalayan Springs of Thailand
SBN 974-8252-67-1
- PHU LUANG
The Kingdom of Plants
ISBN 974-8252-73-6

BIRDWATCHING TIPS

- Consult field guides, checklists, and maps prior to arriving at the birdwatching destination.
- Dress in colours that blend in with the surroundings.
- Bring appropriate equipment such as telescope, bird guide, and a notebook.
- Plan to arrive at the destination at sunrise when birds are first out in search for food and are most active.
- Walk slowly stopping at intervals to listen for calling birds.
- Look for the birds in thickets, on the branches of trees, and on the ground.
- Avoid talking, smoking, or walking on dry leaves, all of which will scare birds away.

CONSERVING BIRD DIVERSITY

Across the world, humans coexist with birds but human activities often affect the survival prospects for birds. Forty-eight species of birds found in Thailand (5% of the total) are globally threatened by the loss or disturbance of their habitats, food resources, and breeding areas, and by other human actions, and so require special conservation attention. A further 97 species (10%) are potentially threatened if current trends persist.

In Thailand, 101 species (10% of the total) are hunted as pests, for food or for the pet trade and are directly threatened by humans. The list of hunted species includes waterbirds, birds of prey, pheasants, parakeets, pigeons, hornbills, pittas weavers, bulbuls, and other forest birds. Worldwide the trade in birds includes 2,600 species and several million birds each year. Ten percent of threatened birds worldwide are affected by the bird trade.

There are a number of ways in which the numbers and distribution of threatened birds are being restored. Habitat conservation programmes are an important mechanism. Feeding habitats for seasonal migrants are being preserved by incorporating mangroves and coastal tidal areas in marine protected areas. Lowland forests that support Gurney's pitta and other diversity are being protected and a reforestation programme planned. Preventing encroachment around the edges of parks maintains the integrity of forest blocks used by the majority of native birds, including migrant raptors and songbirds.

Figure 108

In most cases, preserving and protecting natural habitats can bring back even highly endangered populations of rare birds. These measures are relatively cost effective to implement. As an example, a 3-year Khao Yai Conservation Project preserved over 2,000 sq km of wildlife habitat, discouraged poaching, and provided employment alternatives for local forest resource users, at an annual cost of 7 million baht (US\$171,000).

For critically endangered species, whose populations are extremely small, and whose survival in the wild is uncertain due to factors that simply cannot be controlled, other more costly measures such as captive breeding, are being considered. Captive breeding is risky because birds need to be recovered from the wild to establish breeding populations, and injury is possible. Some species do not breed well in captivity because their natural courting and nesting behaviours are no longer possible. Strict controls on who is allowed to breed endangered species, registration of individuals, and enforcement of laws so that commercial sale is not possible, need to be adopted. Without these controls, captive breeding programmes cannot succeed.

HOW YOU CAN HELP IN THE CONSERVATION OF BIRDS

Visitors to Thailand can assist efforts to preserve and maintain the diversity of birds and their habitats simply by visiting national parks and other wilderness areas. Bird enthusiasts can report the species they observe to authorities. Checklists are now available at many popular national parks. Tourists can report evidence of suspicious activity that might lead to the arrest of unscrupulous individuals trapping or hunting birds and can also participate as volunteers in habitat conservation programmes. In these ways, tourists can help reduce the threats to birds, and at the same time enjoy Thailand's birdwatching paradise.

Contact information:

TO REPORT BIRD SPECIES OBSERVED

- **TO REPORT BIRD SPECIES OBSERVED**

Please contact the Park Visitor Centre of the National Park
or
Bird Conservation Society of Thailand (BCST)*
69/12 Soi Ramindra 24, Jorakaebau, Ladprao, Bangkok 10230, Thailand
Email: bcst@box1.a-net.net.th
Tel: 66-(0)-2943-5965
Web sites:
www.bcst.org/index_ebird.html
www.thai.net/bcst

* The Bird Conservation Society of Thailand (BCST) is a BirdLife Partner

- **TO REPORT EVIDENCE OF SUSPICIOUS ACTIVITY**

Please contact
Wildlife Protection and Suppression Office
Department of National Parks, Wildlife, and Plant Conservation
61 Paholyothin Road, Chatuchak, Bangkok 10900
Tel: 66-(0)-2579-5266

- **HABITAT CONSERVATION VOLUNTEER PROGRAMMES**

Please contact
Wildlife Conservation Society - Thailand Programme
P.O. Box 170, Laksi, Bangkok 10210

Figure 109

Tel: +662-503 4478, +662-503 4479
 Fax: +662-503 4096
 Email: thailand@wcs.org

FAMILIES OF BIRDS IN THAILAND UNDER THREAT

The following bird species are under threat because there is a high demand for them and they are hunted for the local, regional and global bird trade. To help preserve the species, please refrain from purchasing any of the following birds as pets, and if you happen to witness any of the following birds being sold or traded, or note any suspicious activities involving them, please contact:

The Wildlife Protection and Suppression Office
 Department of National Parks, Wildlife, and Plant Conservation
 61 Paholyothin Road, Chatuchak, Bangkok 10900
 Tel: 66-(0)-2579-5266

1. Phasianidae (wood partridges and pheasants) - 4 species
2. Anatidae (White-winged duck) - 1 species
3. Picidae (woodpeckers and barbets) - 3 species
4. Bucerotidae (hornbills) - 7 species
5. Upupidae (Common hoopoe) - 1 species
6. Cuculidae (Coral-billed ground cuckoo) - 1 species
7. Psittacidae (parrots and parakeets) - 4 species
8. Columbidae (pigeons) - 12 species
9. Accipitridae (birds of prey) - 9 species
10. Threskiornithidae (White-shouldered ibis) - 1 species
11. Ciconiidae (Lesser adjutant) - 1 species
12. Pittidae (pittas) - 3 species
13. Irenidae (Asian fairy bluebird and leafbirds) - 6 species
14. Corvidae (jays, crows, magpies, orioles and minivets) - 14 species
15. Muscicapidae (thrushes, robins, and sharmas) - 3 species
16. Sturnidae (starlings and mynas) - 3 species
17. Paridae (Yellow-cheeked tit) - 1 species
18. Pycnonotidae (bulbuls) - 7 species
19. Zosteropidae (Japanese white-eye) - 1 species
20. Sylviidae (laughing thrushes, mesias, minlas and sibilas) - 8 species
21. Nectariniidae (Scarlet-backed flowerpecker) - 1 species
22. Passeridae (weavers and munias) - 7 species
23. Fringillidae (grosbeaks and buntings) - 3 species

About The Author

ANTONY LYNAM

Antony Lynam (Ph.D.), Wildlife Conservation Society (WCS)- Thailand Programme Director and conservation scientist, works with the Thailand Department of National Parks, Wildlife and Plants to develop programmes for the conservation of the country's endangered species, park resources management, and the design and conduct of training curriculum for park rangers.

An Australian citizen, he has authored a number of technical papers and popular articles concerning conservation issues in Australia, North America, and Thailand, and was a contributor to the seminal volume on habitat fragmentation "Tropical Forest Remnants: Ecology, Conservation and Management". He writes frequently on natural history for magazines, journals and newspapers including Wildlife Conservation, The Nation, The Bangkok Post, and The Natural History Bulletin of The Siam Society.

Figure 110

5.5 Web files

5.5.1 ostbk2b.htm

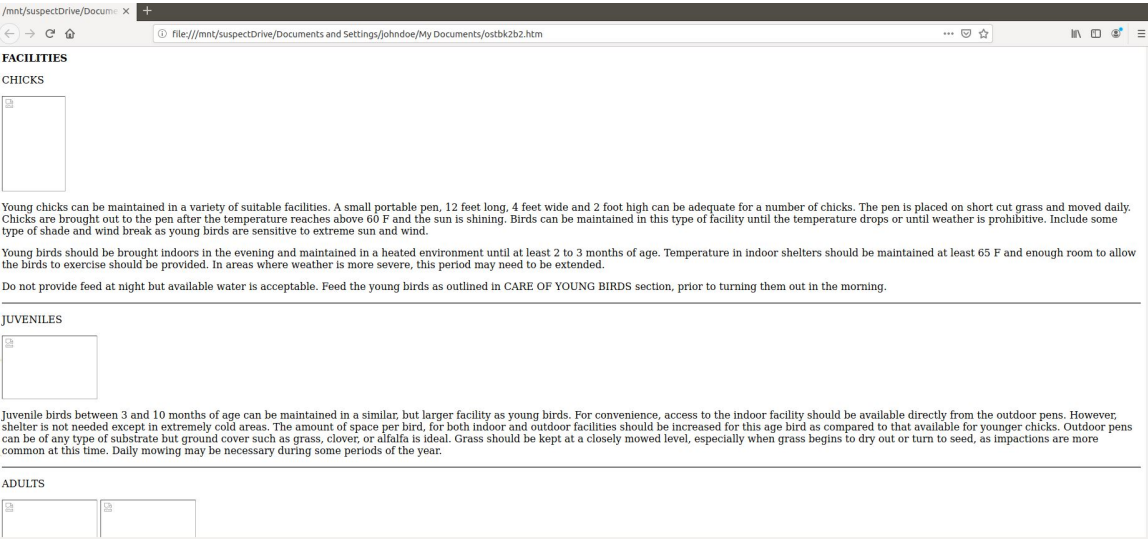



Figure 111

5.5.2 aa010703a.htm

Birding and Birdwatching - 1 x

file:///mnt/suspectDrive/Documents and Settings/johndoe/My Documents/aa010703a.htm

Firefox a empêché ce site d'ouvrir une fenêtre popup.


Home & Garden
Creating a Craft Room  **About Video**
Anne-Marie Barton

About

Birding / Wild Birds
Build a Bluebird Nest Box
Easy Box to Make

This bluebird nesting box is a great way to get started making birdhouses. You do not need to miter any edges and the entire project can be completed using one 6 foot length of 1" x 6" lumber.

Since only simple materials and tools are required, this birdhouse is also a wonderful project for Scouts, youth groups, and beginning woodworking classes.



Click here for drawings of the pieces and dimensions you will need. (A) **Click here** for a close up of the hole. (B) **Click here** for a diagram of the pivot nails. (C)

See the box to the right for [wood](#) and [tool recommendations](#)

Materials needed:
Wood cut to the dimensions shown in A above
Finishing nails
1 eye screw
Wood screws

Directions:

1. Cut the wood to the dimensions in [diagram A](#). All of the pieces can be cut from one 6' length of 1" x 6" lumber.
2. Cut the front entrance hole as in [diagram B](#). This is an oval shaped hole that is 1 3/8" wide and 2 1/4" long. To hole, mark the dimensions on the front.

Related Resources

- [Wood to Make Houses](#)
- [Tools to Make Houses](#)
- [Paints for Houses](#)
- [Bird House Specs](#)
- [Make Birdhouses](#)
- [Make Bird Feeders](#)
- [What to Feed Birds](#)
- [Nesting Materials](#)

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Blue Bird Houses
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[www.thebirdshed.com](#)

Wiggly Nest Boxes
Nest Boxes for all sorts of birds
FSC Timber. Order Online
[www.wigglywiggles.co.uk](#)

Nesting box camera
As featured in The Mail on Sunday View bird nest activity on our T.V.
[www.cambox.co.uk](#)

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- [Birding and Birdwatching - Painting or Staining Bird Houses](#)
- [Visual Bird Field Guide of Birds - by Scientific Name](#)

Free Online

Figure 112

5.6 Email

5.6.1 Email no.1.1

```

From - Wed Feb 09 11:08:07 2005
X-Account-Key: account2
X-UIDL: qX3OACUOgTetW1E2tSGw
X-Mozilla-Status: 0001
X-Mozilla-Status2: 10000000
Message-Id: <ftPrWYA1H5hLVFeYa7N3@fakepop.invalid>
Date: Wed, 09 Feb 2005 11:08:01 +0000
X-UIDL: qX3OACUOgTetW1E2tSGw
X-fakepop-version: 7
X-fakepop-build: Dec 4 2004 17:08:02
X-fakepop-url: http://vztech.com.br/software/fakepop/
X-Message-Flag: message delivered by fakepop - http://vztech.com.br/software/fakepop/
Envelope-to: jdoe@example.com
Delivery-date: Wed, 17 Nov 2004 19:51:39 +0100
Received: from example.org ([192.168.231.26] helo=example.org)
    by mail.example.com with esmtp (Exim 4.34) id 1CIWEs-0005v3-7o
    for jdoe@example.com; Tue, 8 Feb 2005 14:13:26 +0100
    Received: (qmail 23682 invoked from network); 08 Feb 2005 14:13:24 -0000
From: Ben Forbes <ben@example.org>
To: jdoe@example.com
Subject: good pics
Date: Tue, 8 Feb 2005 14:13:26 +0000
User-Agent: KMail/1.7.2
MIME-Version: 1.0
Content-Type: Multipart/Mixed;
    boundary="Boundary-00=_GkMCCEL2vkLPD1G"
Status: O
X-UID: 11909
Content-Length: 155618
X-Keywords:
X-Length: 158992

--Boundary-00=_GkMCCEL2vkLPD1G
Content-Type: text/plain;
    charset="utf-8"
Content-Transfer-Encoding: 7bit
Content-Disposition: inline

Hi thought you'd like these

enjoy
--Boundary-00=_GkMCCEL2vkLPD1G

```

Figure 113

5.6.2 Email no.1.2

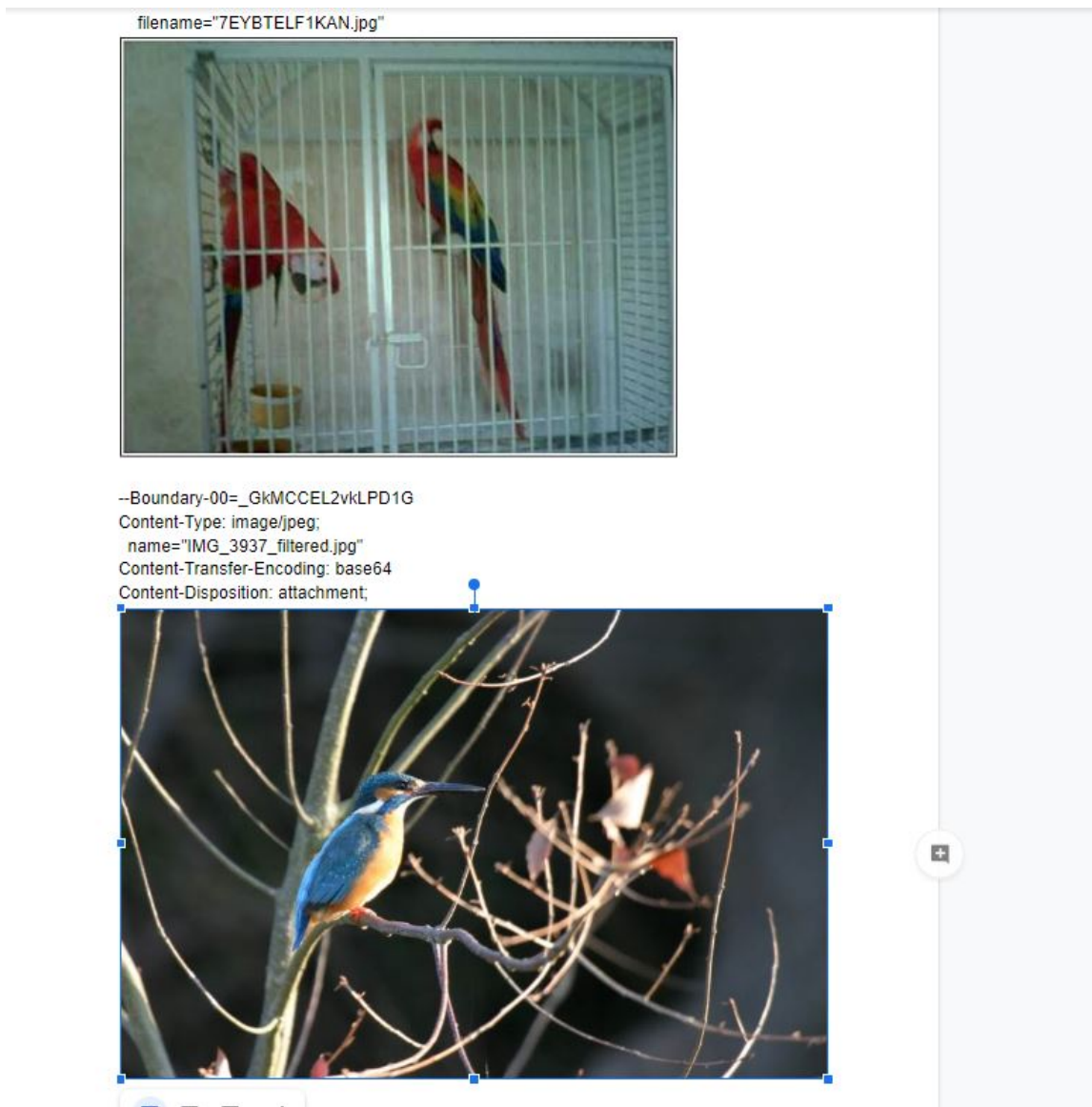


Figure 114

5.6.3 Email no.1.3



Figure 115

5.6.4 Email no.2

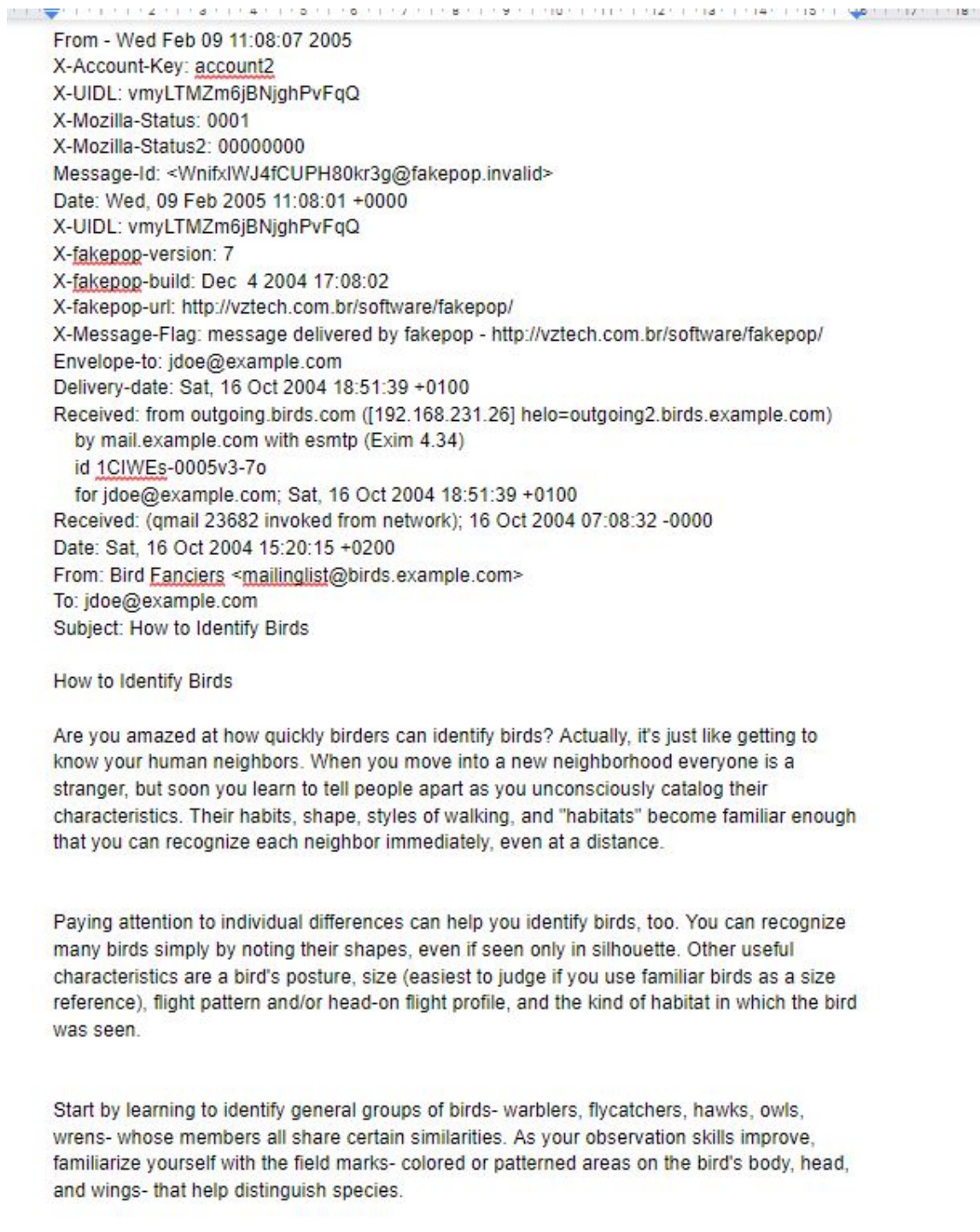


Figure 116

5.6.5 Email no.3.1

From - Wed Feb 09 11:08:08 2005
X-Account-Key: [account2](#)
X-UIDL: ZrAWXdiyn9fDpdDxkzAl
X-Mozilla-Status: 0001
X-Mozilla-Status2: 10000000
Message-Id: <OD1VOUt6OGifJL8TS8ls@fakepop.invalid>
Date: Wed, 09 Feb 2005 11:08:01 +0000
X-UIDL: ZrAWXdiyn9fDpdDxkzAl
X-fakepop-version: 7
X-fakepop-build: Dec 4 2004 17:08:02
X-fakepop-url: <http://vztech.com.br/software/fakepop/>
X-Message-Flag: message delivered by fakepop - <http://vztech.com.br/software/fakepop/>
Envelope-to: jdoe@example.com
Delivery-date: Tue, 8 Feb 2005 14:35:29 +0000
Received: from example.org ([192.168.231.26] helo=example.org)
by mail.example.com with esmtp (Exim 4.34)
id [1CIWEs-0005v3-7o](#)
for jdoe@example.com; Tue, 8 Feb 2005 14:35:27 +0000
Received: (qmail 23682 invoked from network); 8 Feb 2005 14:35:27 +0000
Date: Tue, 8 Feb 2005 14:35:27 +0000
From: Ben Forbes <ben@example.org>
To: jdoe@example.com
Subject: some more good ones
User-Agent: KMail/1.7.2
MIME-Version: 1.0
Content-Type: Multipart/Mixed;
boundary="Boundary-00=_v4MCC9SXbEkeHP9"
Status: O
X-UID: 11910
Content-Length: 534627
X-Keywords:
X-Length: 542945

--Boundary-00=_v4MCC9SXbEkeHP9
Content-Type: text/plain;
charset="utf-8"
Content-Transfer-Encoding: 7bit
Content-Disposition: inline

Thanks for the pics you sent me here are some I really like

Figure 117

5.6.6 Email no.3.2

Content-Disposition: attachment;
filename="BC7 feeding the birds.jpg"



--Boundary-00=_v4MCC9SXbEkeHP9
Content-Type: image/jpeg;
name="glfs-storm-birds.jpg"
Content-Transfer-Encoding: base64

Figure 118

5.6.7 Email no.3.3



Nesting red-winged blackbird/
Carouge à épaulettes en cours de nidification
Cont Mike Hopiak / Cornell Lab of Ornithology ent-Disposition: attachment;
filename="glfs-storm-birds.jpg"

--Boundary-00=_v4MCC9SXbEkeHP9
Content-Type: image/jpeg;
name="colorful-birds.jpg"
Content-Transfer-Encoding: base64
Content-Disposition: attachment;
filename="colorful-birds.jpg"



Figure 119

5.6.8 Email no.3.4

--Boundary-00=_v4MCC9SXbEkeHP9
Content-Type: image/jpeg;
name="IMG_3937_filtered.jpg"
Content-Transfer-Encoding: base64
Content-Disposition: attachment;
filename="IMG_3937_filtered.jpg"



--Boundary-00=_v4MCC9SXbEkeHP9
Content-Type: image/jpeg;



name="gawall8.jpg"

Figure 120

5.6.9 Email no.4

From - Wed Feb 09 11:08:08 2005
X-Account-Key: account2
X-UIDL: ml9vNXPVmE7PpsleLfhS
X-Mozilla-Status: 0001
X-Mozilla-Status2: 00000000
Message-Id: <FcJJpiktBLDJDt7QctR1@fakepop.invalid>
Date: Wed, 09 Feb 2005 11:08:01 +0000
X-UIDL: ml9vNXPVmE7PpsleLfhS
X-fakepop-version: 7
X-fakepop-build: Dec 4 2004 17:08:02
X-fakepop-url: <http://vztech.com.br/software/fakepop/>
X-Message-Flag: message delivered by fakepop - <http://vztech.com.br/software/fakepop/>
Envelope-to: jdoe@example.com
Delivery-date: Wed, 17 Nov 2004 19:51:39 +0100
Received: from example.org ([192.168.231.26] helo=example.org)
by mail.example.com with esmtp (Exim 4.34)
id 1CIWEs-0005v3-7o
for jdoe@example.com; Fri, 15 Oct 2004 18:51:39 +0100
Received: (qmail 23682 invoked from network); 15 Oct 2004 07:08:32 -0000
Date: Wed, 17 Nov 2004 19:20:15 +0200
From: Ben Forbes <ben@example.org>
To: jdoe@example.com
Subject: expensive birds

A young woman was walking past a pet shop and saw an exotic, white cockatoo for sale. The price was \$6000. She entered the store and asked the clerk why the bird was so expensive. The clerk told her that the bird spoke 6 different languages. "Does it speak English?" asked the woman. "Of course it does!" said the clerk. The woman thought about her mother who was multi-lingual, a bit of a recluse and lived all alone. She decided to purchase the bird and send it to her mother as a companion. She paid for the bird and made arrangements for it to be delivered. The following day, the woman telephoned her mother. "Mama, did you like the cockatoo that I sent you?" "Oh it was delicious!" she replied. "Mama, what do you mean delicious?" "I made soup out of it." "But mama, that bird spoke six different languages!" "Oh dear! Why didn't it say something?"

Figure 121

5.7 Registry Analysis

5.7.1 Accounts

```
User Information
-----
Username      : Administrator [500]
Full Name     :
User Comment   : Built-in account for administering the computer/domain
Account Type  : Default Admin User
Last Login Date : Never
Pwd Reset Date : Mon Jan 24 16:31:26 2005 Z
Pwd Fail Date  : Never
Login Count   : 0
--> Password does not expire
--> Normal user account

Username      : johndoe [1003]
Full Name     :
User Comment   :
Account Type  : Default Admin User
Last Login Date : Wed Feb 9 16:49:18 2005 Z
Pwd Reset Date : Mon Jan 24 16:36:30 2005 Z
Pwd Fail Date  : Wed Feb 2 15:08:27 2005 Z
Login Count   : 21
--> Password does not expire
--> Normal user account

Username      : jane [1004]
Full Name     : jane
User Comment   :
Account Type  : Custom Limited Acct
Last Login Date : Thu Feb 3 11:23:04 2005 Z
Pwd Reset Date : Wed Feb 2 12:37:25 2005 Z
Pwd Fail Date  : Wed Feb 2 15:08:27 2005 Z
Login Count   : 1
--> Password does not expire
--> Normal user account

Username      : bob [1005]
Full Name     : bob
User Comment   :
Account Type  : Custom Limited Acct

Last Login Date : Thu Feb 3 10:12:34 2005 Z
Pwd Reset Date : Wed Feb 2 15:08:54 2005 Z
Pwd Fail Date  : Never
Login Count   : 1
--> Password does not expire
--> Normal user account
```

Figure 122

5.8 Browser History

5.8.1 history page 1

C:/Documents%20and%20Settings/johndoe/Desktop/birdtrans2.jpg 02/03/2005 10:04:48
 C:/birdwatching.doc 02/03/2005 10:49:39
 C:/Documents%20and%20Settings/johndoe/My%20Documents/aa010703a.htm 02/02/2005 09:25:59
 C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/babyscot_young.jpg 02/03/2005 10:00:19
 E:/birds/Killdeer.jpg 02/03/2005 09:49:29
 C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/177.jpg 02/03/2005 10:01:38
 C:/Documents%20and%20Settings/johndoe/My%20Documents/ostbk2b2.htm 02/03/2005 10:02:45
 D:/Prac5/Q3%20Thread%20(Statechart).gif 02/02/2005 10:10:48
 C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/snow_geese.jpg 02/02/2005 09:18:53
 C:/Documents%20and%20Settings/johndoe/Application%20Data/Mozilla/Firefox/Profiles/w4nf3obl.default/bookmarks.html 02/03/2005 07:20:20
 E:/birds/non%20images/BirdingGuide.pdf 02/03/2005 10:52:01
 C:/Documents%20and%20Settings/johndoe/My%20Documents/newbies2.jpg 02/03/2005 10:05:44
 D:/Prac4/Prac4.gif 02/02/2005 10:10:16
 C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/7107298.jpg 02/02/2005 09:20:33
 C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/wbpremium_s.jpg 02/02/2005 09:28:19
 C:/Documents%20and%20Settings/johndoe/My%20Documents/birds.zip 02/09/2005 06:28:00
 C:/Documents%20and%20Settings/bob/My%20Documents/My%20Music/ready2fledge.jpg 02/03/2005 10:06:42
 C:/Documents%20and%20Settings/johndoe/My%20Documents/stuf.doc 02/09/2005 11:57:49
 C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/tn_duck_3.jpg 02/02/2005 09:18:13
 E:/birds/audio/aggressive_song.wav 02/03/2005 07:22:51
 F:/AlmondMarshGreatBlueHeronStalling.jpg 02/09/2005 12:06:28
 C:/Program%20Files/MSN/aggressive_song.wav 02/09/2005 12:00:50
 C:/WINDOWS/system32/oobe/actshell.htm 01/24/2005 11:13:56

Figure 123

5.8.2 history page 2

C:/EvanstonWoodpecker.jpg 02/03/2005 09:14:59
E:/birds/non%20images/BookList.doc 02/03/2005 10:51:54
C:/Documents%20and%20Settings/johndoe/My%20Documents/nestboxtips.txt 02/02/2005 09:29:30
C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/babyscot_2 weeks1.jpg 02/03/2005 10:00:27
C:/Documents%20and%20Settings/johndoe/My%20Documents/kakapo.ram 02/02/2005 10:11:51
C:/Documents%20and%20Settings/johndoe/Application%20Data/Mozilla/Firefox/Profiles/w4nf3obl.default/cookies.txt 02/03/2005 07:19:07
C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/chicks2.jpg 02/03/2005 10:05:03
C:/Documents%20and%20Settings/johndoe/My%20Documents/My%20Pictures/40m.jpg 02/02/2005 09:43:36
C:/Documents%20and%20Settings/All%20Users/Documents/My%20Music/Sample%20Music/Doc1.doc 02/03/2005 09:17:48
D:/Prac5/Q3%20Thread%20(Statechart).gif 02/02/2005 10:10:49

Figure 124

5.9 PDF Files

5.9.1 Birding Site

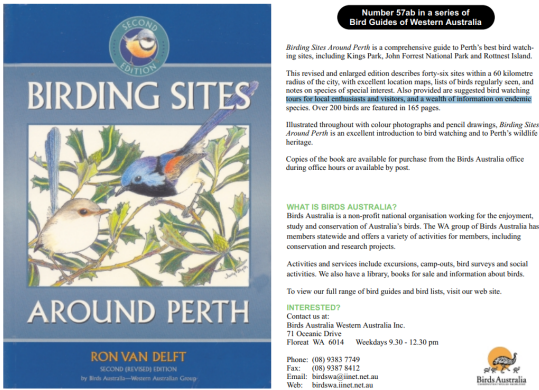


Figure 125

5.9.2 Botanical Garden

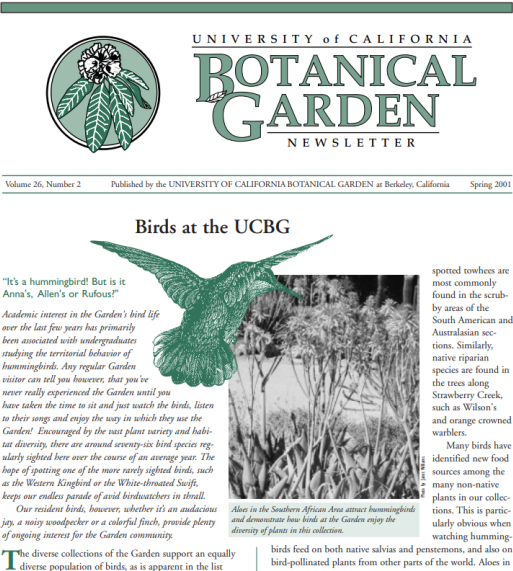


Figure 126

5.9.3 Bird Guide



Figure 127

5.10 GPG Picture

5.10.1 WhiteThroatedSparrowInTree.jpg



Figure 128

5.10.2 WhiteFacedHeronFlying.jpg



Figure 129

5.10.3 WhiteFrontedParrot.jpg



Figure 130

5.10.4 WhoopingCranes.jpg



Figure 131

5.10.5 yellow-wag-cover-nb.jpg



Figure 132

5.11 Global Timeline

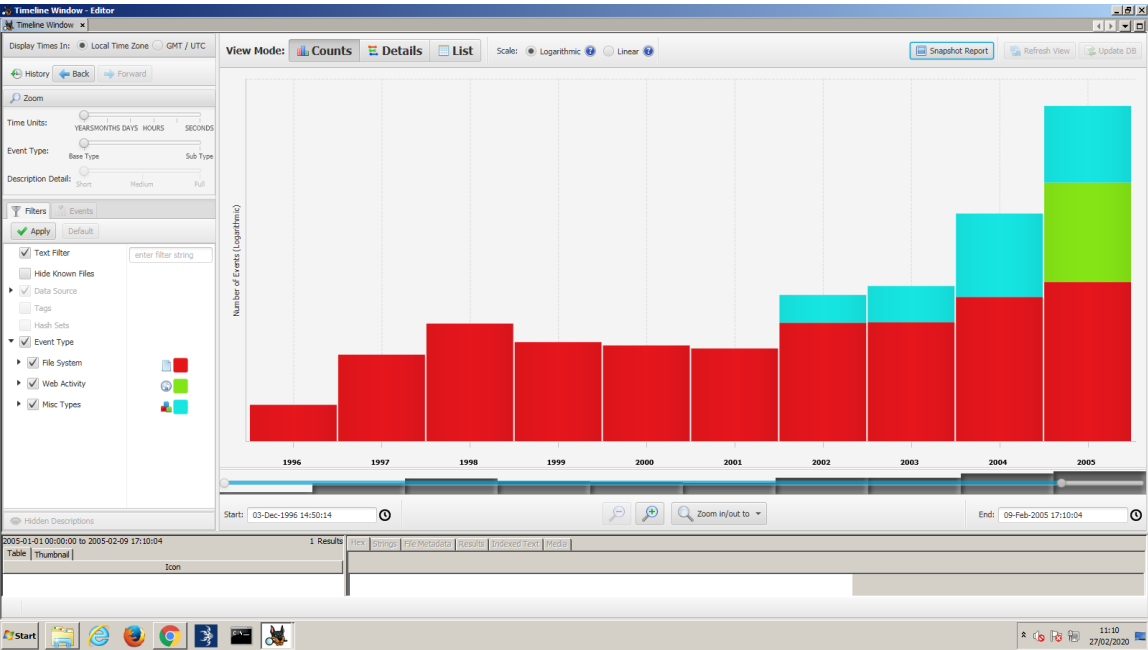


Figure 133