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Appendix 2: Methodology

GENERAL STRATEGIES

Our general search strategy was to be both systematic and adaptive. Systematic surveys offer the best opportunity to inventory and map cavities, feeding sites, and key habitat features across the landscape. However, remaining adaptive increases the probability of sightings by providing timely responses to triggers, such as probable encounters and evidence from autonomous acoustic recording units (ARUs; see below) or remote time-lapse video systems. Focusing efforts on discrete locations following a trigger effectively reduces the search area and increases the chances of additional encounters. The trade-off of being both adaptive and systematic is a loss in efficiency as staff and volunteers are often “switching gears” from one set of tasks to another.

The specific protocols used to search for IBWOs can be grouped into two categories—(1) survey techniques that are designed to reveal features, such as cavities and feeding trees that have the potential to lead us to IBWOs and (2) monitoring techniques that are designed to produce direct visual or acoustic documentation of IBWOs. Monitoring techniques can further be divided into those that rely on human observers and those that use technology in place of human presence. Below is a complete list of all survey and monitoring techniques that we used.

SPECIFIC MONITORING AND SURVEY TECHNIQUES

All staff and volunteers carried binoculars, GPS units, and hand-held digital video cameras equipped with a shotgun microphone during all activities.

ACTIVE SEARCH

Active searching was used to slowly, quietly, and discreetly survey areas of primary interest. We paddled or used electric trolling motors on canoes to quietly look and listen for IBWO in flooded forest. In non-flooded areas we traveled by foot. This technique was most useful when making initial visits to new areas and when responding adaptively to possible sightings or other evidence.

STATIONARY WATCH

Searchers sat quietly and actively scanned their surroundings, looking and listening for IBWOs from strategic observation points or blinds that (1) permitted a larger than average view of the landscape, such as small lakes or forest openings; (2) created a situation of forced exposure such as a forest bottleneck or other perceived travel corridor; (3) contained obvious potential food from dead/dying trees or mast/ fruits; and (4) represented the location of possible observations, roost holes, or nest cavities. Stationary watches were conducted opportunistically when quality habitats were encountered. In addition, stationary watches were often conducted for the first two hours of each morning before transect surveys began. Once at the designated observation point, searchers sat quietly with minimal movement in full camouflage to observe their surroundings. While on post, observers actively scanned their surroundings and conducted periodic point counts. Observers also used audio playback (see below) from these fixed locations.

CAVITY AND FEEDING TREE TRANSECT SURVEYS

After leaf-drop and before green-up, we placed transects at 50-m intervals to systematically inventory and map important features such as cavities, feeding trees, and habitat features. Our crew was instructed to stop every 20 m or so along the transect to scan all trees within a 50-m radius for cavities and feeding sign. This was continued for the length of the transect, which depended on landscape...
features and the extent of the habitat. Our goal was a complete inventory of all cavities and foraging sign within the areas surveyed. When a cavity or feeding tree was discovered it was classified (see below) and entered into the GIS database. The best cavities and feeding trees were then monitored by humans or by using remote time-lapse video cameras.

We classified cavities into three categories (Figure 1):

A: Very large cavity in size range of IBWO with irregular oval or rectangular shape (4.0–4.75 in [10.2–12.1 cm] wide and 5.0–5.75 in [12.7–14.6 cm] tall)

B: Cavity larger than typical PIWO cavity but shape is fairly regular, nearly perfect round or oval; or cavity of irregular shape and within upper size range for PIWO, and lower size range for IBWO

C: Cavity of fairly regular shape, nearly perfect oval or round, in the upper size range for PIWO and lower size range for IBWO

We classified feeding trees into two categories and as either fresh or old:

A: Scaling with only bark removed; bark tight; no digging in wood layer; or thin flakes of wood layer scaled, straight scars or no scarring of wood layer

B: As “A” but with some digging in wood layer, conical or non-rectangular shaped pits; and/or horizontal scars with undulating edges

Fresh: Chips and wood fresh, not weathered or gray

Old: Chips and wood obviously weathered or discolored; no chips present, powdery wood, or obvious decay

Cavity Monitoring

We observed the most suitable cavities found during Phase III searching, and the best cavities identified during Phases I and II for the presence of roosting or nesting IBWOs. We monitored cavities for the last two hours of daylight from an inconspicuous location at a distance of approximately 50 m. We also used time-lapse video cameras to provide long-term monitoring at the best quality cavities (see description of technique below).

Foraging Tree Monitoring

We used time-lapse and heat/motion triggered cameras to monitor activity at possible IBWO foraging trees (see details below).

Monitoring with Remote Time-lapse Video Cameras

Campephilus woodpeckers, including the IBWO, display high site fidelity toward their roost cavities. That is, individuals often return each evening to the same tree cavity to roost for the night. In addition,
IBWOs leave conspicuous, but widely distributed feeding sign as they scale (remove bark from) recently dead trees in search of beetle larvae, their primary food. A strategy for locating, documenting, and studying *Campephilus* woodpeckers is to monitor cavities and feeding trees. Using human observers creates site-level disturbance, is impractical in remote areas, especially given the need to arrive before dawn or leave after dark, and is expensive. Through experimentation with various types of remote camera systems, we have found a time-lapse video system that works well for monitoring cavities and feeding trees (Luneau 2007). The system is called a Reconyx (www.reconyx.com).

The Reconyx employs a compact camera system contained in a small suitcase-like plastic housing. Eight AA batteries supply power and images are stored on standard digital flashcards. The camera can be programmed to shoot still images when triggered by motion or heat, or can be set to record time-lapse video. When set in “near video mode” the frame interval can be adjusted to the desired level. We programmed the cameras to shoot one frame every 4 seconds when focused on cavities and a frame every 12 seconds when monitoring feeding trees. The frame interval setting is a trade-off between the probability of photographing a bird that enters the field of view and data storage limitations. Higher frame rates result in higher probabilities of detection, but decreased deployment periods because data storage reaches capacity sooner.

When monitoring cavities we programmed cameras to capture one image every 4 seconds for the first and last 120 minutes of daylight. When deployed on feeding trees, cameras were set to shoot all day at an interval of one image per 12 seconds. At these settings with a 1-gigabyte Flash Card installed, cameras can be deployed for about 10 days before data need to be extracted and batteries replaced.

**Audio Playback**

We broadcast a 1-minute series of IBWO kent-calls extracted from the 1935 Allen-Kellogg recordings, waited 15 minutes, then broadcast a 1-minute series of double-knock drumming displays. Playbacks were sometimes done systematically from blinds or as searchers traversed targeted areas of quality habitat. In other cases, playback was conducted opportunistically in response to perceived IBWO calling/drumming or when particularly good habitat was encountered.

The quality of the Allen-Kellogg recordings (Macaulay Library # 6784) were not ideal for playback and no known IBWO double knock recording exists. To improve the Allen-Kellogg recording, the background noise between calls was completely eliminated and brought down to digital black. The inter-note distances remain the same between *kent* calls, but several pauses were added to avoid continuous calling during playback and to give field personnel a few seconds to listen for responses during the playback cycle. A brief fade was added prior to each *kent* but not over the actual call and a longer fade was added to the end of the call. The fades help limit reverberation but do not alter the call itself. For double knocks we had to engineer an appropriate recording based on the written descriptions of IBWO double knocks. A Pileated Woodpecker’s (*Dryocopus pileatus*) drum (Macaulay Library # 47703) was used to create the playback track. The individual knocks were edited so that the inter-knock intervals matched those of Powerful Woodpecker (*Campephilus pollens*) (Macaulay Library # 84098) for three of the double-knocks. For one double knock the inter-knock interval was made slightly longer and for the other it was slightly shortened.
Appendix 3: Assessing Potential IBWO Detections

CATEGORIZING AND SCORING RECORDED SOUNDS

Acoustic encounters that lack recordings are interesting, but by themselves don't provide enough information to be ranked in any way. It's difficult enough for observers to recount sightings with sufficient detail to be useful. The memory of a sound simply cannot be scored.

The system described below was developed for categorizing and scoring of sounds recorded by Autonomous Recording Units (ARUs), but can be applied to any field recording. Reviewing data from ARUs is a multi-step process. Described below is the final step in which sounds are reviewed and scored by an expert panel.

Sounds are first categorized into one of 8 possible classes (P1-4 or I1-4) and then given a numerical code based on a binomial (0 or 1) scoring system. The binomial scores are assigned based on responses to questions. Vocalizations and double knocks are categorized using the same classes, but scored using different sets of questions.

Categories for Vocalizations and Double Knocks

I1: Implausible IBWO, source known, keep for analysis purposes
I2: Implausible IBWO, source known, discard
I3: Implausible IBWO, source unknown, keep for analysis purposes
I4: Implausible IBWO, source unknown, discard
If category is I1–I4, no additional scoring is applied.
P1: Plausible IBWO, no likely alternative identified
P2: Plausible IBWO, alternate possibility identified but not present in recording
P3: Plausible IBWO, alternate possibility identified and present in recording
P4: Insufficient signal for full analysis
If category is P1–P4, record category and apply appropriate score.

Vocalization Scoring Questions (No = 0, Yes = 1, Total Possible = 5):

1. Are harmonic intervals appropriate?
2. Is harmonic emphasis appropriate?
3. Is the event part of a biologically-appropriate series?
4. Is there a temporal context or co-occurrence with other events of interest on the same day?
5. Is there a clear temporal context or co-occurrence with other events of interest across days?

What gets scored?
If P1, P2, or P3 score it
If P4 score what is possible
If I1, I2, I3, or I4 don't score

Scoring nomenclature will follow the convention of using the category, followed by a hyphen, and then the score. For example, a plausible recording with no obvious alternative and a score of 4 would be recorded as P1-4. Implausible classifications would simply be listed as I1, I2, I3, or I4 as they don't receive a score.
Appendix 4: ARU Deployment, Retrieval, and Return Instructions

14 December 2006

This document provides step-by-step instructions for deploying a pre-programmed ARU, including data recording and entry.

WHAT YOU WILL RECEIVE

Be sure to save the ARU shipping box and packing materials—you will need all of this to return the ARU to Cornell.

The ARU shipping box contains the following items:

- ARU
- battery box (battery included)
- power cable
- adjustable-length bungee cord (for securing ARU to tree)
- ratchet tie-down strap (for securing battery box to tree)
- deployment announcement script
- ARU deployment data sheet
- ARU retrieval data sheet
- playback log data sheet

These items are shown in Figure 1.

HANDLING GUIDELINES

Although ARUs are reasonably robust, they should be handled with the same degree of care that you would exercise for something like a laptop computer. Don’t drop it or throw it. When picking up or holding the unit, always grasp it by the PVC housing, not the windscreen. Holding the unit by the windscreen could cause the windscreen to pop off and damage the microphone in the process.

TESTING THE ARU

Immediately after unpacking the ARU, test the unit by the following procedure.

1. Connect one end of the power cable to the power port (middle of three black connectors) on the ARU, and the other end to the battery box. The two ends of the cable are interchangeable, and the connectors are keyed so that will only seat one way. Line up the notch and ridge and press the cable connector into the connector on the ARU or battery box until it seats firmly. Rotate the collar on the cable connector clockwise to tighten. Gently pull back on the connector to make sure that the locking ring is holding it in place.

2. Test 1: After 5–10 seconds, the LED on the ARU should blink in response to your voice when you speak in a normal voice. The LED blinks green for quieter sounds and red for louder sounds.

3. Test 2 (not necessary if Test 1 passed): If the LED does not blink in response to speech within 60 seconds, watch the LED closely for at least a minute. If the ARU is receiving power, the LED should blink green once every 20–30 seconds.

4. If the ARU fails either of the two tests above, contact Cornell for troubleshooting assistance (Technical support is available during normal business hours (M-F, 8:00 – 17:00, EST)).
Chris Tessaglia-Hymes (first choice): 607-254-2418; cth4@cornell.edu
Russ Charif (second choice): 607-254-2458; rcharif@cornell.edu

Unplug the ARU from the power cable within four minutes after powering the unit up, in order to prevent the unit from launching its normal recording schedule.

DEPLOYING THE ARU

Although an ARU can be deployed by one person with experience, we recommend having two people present for a deployment, especially if the deployment site is flooded. You can transport the assembled ARU and the battery box to the deployment site in a large daypack or small frame pack.

WHAT YOU WILL NEED FOR DEPLOYMENT

In addition to all of the items listed above, you will need to bring the following items with you to the ARU deployment site:

• GPS receiver
• clipboard for data sheet
• (optional) ladder if needed to mount ARU above rising water levels (see next section)

CHOOSE THE DEPLOYMENT SITE

1. If possible, avoid placing ARU within earshot of highways, roads, bridges, or other sources of human-generated noise (e.g., farm machinery).
2. If you are deploying at a site that may be subject to extreme changes in water levels, make sure the ARU and battery box are mounted high enough to stay above the highest possible water level.
3. Choose a tree to which to attach the ARU. Smaller trees are preferable, in order to minimize acoustic shadowing effects of the tree trunk on the microphone. If possible choose a tree just large enough to support the battery box securely (around 4” diameter.)

SECURE THE ARU TO A TREE

1. Adjust the length of the bungee cord so that it will be stretched fairly tight when wrapped once or twice around the tree and hooked to the two D rings on the ARU.
2. Attach the ARU to the tree with the bungee, as high as you can reach. This is easiest if one person holds the ARU in place while a second person stretches and hooks the bungee to the D rings. See Figure 2.

SECURE THE BATTERY BOX TO THE TREE

1. Wrap the ratchet tie-down strap around the tree approximately 12 inches below the bottom end of the ARU’s windscreen, and tighten the ratchet until there

Figure 2. ARU attachment to tree.
is a small amount of slack in the strap. This is easier if a second person holds the strap in place.

2. Put the battery box against the tree so that the shelf brackets brace against the trunk just above the ratchet strap, and slide the box down so that the shelf brackets slip into the loop of the ratchet strap. Crank the ratchet strap tight until the battery box is held firmly in place against the trunk.

**Complete the ARU Deployment data sheet**

Enter the GPS location, place name, and other information.

**Connect the power cable**

1. Connect one end of the power cable to the power port (middle of three black connectors on side of unit) on the ARU, and the other end to the battery box. The two ends of the cable are interchangeable, and the connectors are keyed so that will only seat one way. Line up the notch and ridge and press the cable connector into the connector on the ARU or battery box until it seats firmly. Rotate the collar on the cable connector clockwise to tighten. Gently pull back on the connector to make sure that the locking ring is holding it in place.

2. After 5–10 seconds, the LED on the ARU should blink in response to your voice when you speak in a normal voice. The LED blinks green for quieter sounds and red for louder sounds. If the LED does not blink in response to speech within 30 seconds, see the Troubleshooting section at the end of this document.

**Enter the plug-in time on the ARU Deployment data sheet, to the minute, as given by your GPS clock.**

**Read the announcement card slowly and clearly, filling in information as needed.**

CONGRATULATIONS! You have completed the ARU deployment.

**Entering the deployment data into the ARU online database**

At the earliest opportunity after the deployment is complete, go to the ARU deployment data entry website: [http://equipment.birds.cornell.edu](http://equipment.birds.cornell.edu).

**Copy the data from the ARU Deployment datasheet into the data entry form on the website.**

**IBWO Playbacks during the ARU Deployment**

Playbacks recorded by ARUs can substantially slow the analysis of the data, especially if they are distant and recorded only faintly by the ARU. If at all possible, avoid using playbacks of kents or double knocks (or otherwise simulating IBWO sounds, e.g., by double-knocking with a stick or canoe paddle) within 500 m of a deployed ARU.

If you deem it essential to use playbacks, please:

1. Use only the Cornell-supplied playback CD, which incorporates sounds of a loon as a marker to aid in distinguishing playbacks from live IBWO sounds.

2. Log playback times and locations using the data form supplied with the ARUs.

3. Upon completion of the ARU deployment, enter the playback data into the Cornell database at [http://equipment.birds.cornell.edu](http://equipment.birds.cornell.edu).
Failure to follow these guidelines can significantly delay completion of the analysis, and could potentially result in false detection of IBWO.

RETRIEVING THE ARU

WHEN TO RETRIEVE

The ARU should record for at least 14 days from the time you deploy it. In most cases, the battery will fail between 15 and 20 days. We recommend retrieving the unit 14 or 15 days after deployment.

WHAT YOU WILL NEED FOR RETRIEVAL

In addition to all of the items listed above, you will need to bring the following items with you to the ARU deployment site:

• GPS receiver
• clipboard for data sheet

AT THE ARU SITE

1. Watch the LED for a minute or two to determine whether or not the LED “heartbeat” is still present; enter this on the ARU Retrieval Data sheet.
2. Observe whether the LED flickers in response to your voice. (Note that no response is expected if you’re retrieving the unit outside either of the two scheduled recording periods.) Enter the result on the ARU Retrieval Data sheet.
3. Disconnect the power cable at both ends.
4. Note the disconnect time on the ARU Retrieval Data sheet.
5. Note any signs of damage to the unit, and any other relevant observations on the data sheet.
6. Loosen the ratchet strap and remove the battery box. Take the ratchet strap completely off the tree.
7. Release the bungee cord and take down the ARU.
8. Stow ARU, battery box, power cord, bungee, ratchet strap, and data sheet for carry out from the deployment site.

ENTERING THE RETRIEVAL DATA INTO THE ARU ONLINE DATABASE

At the earliest opportunity after retrieving the ARU, go to the ARU deployment data entry web site: <http://equipment.birds.cornell.edu >.

Copy the data from the ARU Retrieval data sheet into the data entry form on the web site.

RETURNING THE ARU TO CORNELL

1. Repack the ARU into its original shipping box, using the original packing materials.
2. Open the battery box and unscrew the terminals on the battery pack. Remove all of the wires from the battery pack. Remove the battery pack from the box and recycle or discard. Close up the battery box, and pack into the original shipping box.
3. Seal the shipping box and attach the shipping label. Unit should be shipped by second-day UPS or FedEx.
4. When the ARU has been shipped, please visit the ARU tracking website and enter the shipping/tracking information into the database.
Appendix 5: Example of Autonomous Recording Unit (ARU)
Sound Analysis Report

A. GENERAL DEPLOYMENT INFORMATION

Deployment Name: ARAS07
Deploy Date: 12 April 2007
Retrieval Date: 2 May 2007
Location Name: Wattensaw WMA, Wattensaw Bayou
UTM Zone: 15 S
Latitude: 638133
Longitude: 3858266
Recording Schedule: 05:45 – 10:15, 15:45 – 20:15
Total Hours Recorded: 180 hours; 30 mins
General Comments: (From field crew) – Boat traffic.

B. GENERAL EVENT SUMMARY

<table>
<thead>
<tr>
<th>Event name</th>
<th>Type*</th>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARAS07_20070426_1944_r_P1-4.wav</td>
<td>R</td>
<td>P1</td>
<td>4</td>
</tr>
<tr>
<td>ARAS07_20070428_0610_r_P1-1.wav</td>
<td>R</td>
<td>P1</td>
<td>1</td>
</tr>
<tr>
<td>ARAS07_20070501_1949_r_P1-3.wav</td>
<td>R</td>
<td>P1</td>
<td>3</td>
</tr>
</tbody>
</table>

*R denotes double-knock and V denotes vocalization

C. DETAILED DEPLOYMENT SUMMARY

Phase I: Computer Automated Search (see Table 1)

Total number of double-knock events flagged: 183
Total number of vocalization events flagged: 7,577

Phase II: Single Analyst Review (SAR) (see Table 1)

Total number of double-knock events reviewed: 183
Total number of vocalization events reviewed: 7,577
Comments: ~40% of deployment had some sort of static.

Phase III: Expert Panel Review (see Table 1)

Total number of double-knock events passed to group review: 4
Total number of vocalization events passed to group review: 0

Table 1. Review process summary, displaying the number of events by category during each phase in review process.
# Double Knocks

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>ARAS07_20070426_1944_r_P1-4.wav</td>
<td>26 April 2007 19:44</td>
<td>P1</td>
<td>4</td>
<td>NA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>NA</td>
<td>More energy on 2nd strike; sounds small; woody but not resonant</td>
<td></td>
</tr>
<tr>
<td>ARAS07_20070428_0610_r_P1-1.wav</td>
<td>28 April 2007 06:10</td>
<td>P1</td>
<td>1</td>
<td>NA</td>
<td>0</td>
<td>0</td>
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Appendix 6: Description of Wattensaw WMA Encounters

By Ross Everett & Allan Mueller

Report of potential sightings of Ivory-billed Woodpeckers
Written up by Catherine Rideout, Ornithologist AGFC

12/31/06

Allan Mueller and I followed up on a report which I received on a potential sighting of two Ivory-billed Woodpeckers at Wattensaw WMA on 12/31/06. Allan and I met with the person reporting an encounter at about 5:15 p.m. until 6:20 p.m. on 12/31 at the location of the sighting which we accessed by Robinwood Road and Buck’s Landing on the Northern part of the WMA. We took about a 1/2 mile hike on a trail in from the campground/parking lot and were located on Wattensaw Bayou on the north side of the Bayou as it curves north and were about 1/2 mile NW of the confluence of Wattensaw Bayou and the White River (there is a boat ramp at the end of Tower Road). The potential encounter occurred when the individual was scouting for duck hunting on the morning of 12/31/06.

The sighting occurred at about 10:30 a.m. Prior to the sighting of what he believes was a male Ivory-billed Woodpecker, the individual listened to what he thought was a woodpecker doing a “tap tap.” When I asked whether it did only two taps, he said that that was correct. He said the bird did one or two “tap taps” every three to five minutes or so. He listened to the bird doing this for about 25 minutes in all. He sat in one location and heard the bird tapping and then moved to another area a couple of hundred yards away and sat down and was still.

He watched a bird from 40 yards for 7 to 8 minutes at the second location. He did not have binoculars or a camera so he was watching the bird unaided. The bird was a large woodpecker with a very red crest. He emphasized that what he noticed the most was the great deal of white on the wings as the bird was perched on the side of a tree. He said the white on the back of the bird covered the bottom half of the wings. When I asked him how big the bird was he reiterated that it was a very large bird. He said it was “bigger than a crow” and he emphasized the word “bigger” when he said it. He said the bird when perched was partly in the shadows and he was unable to see the belly or the chin very well. He said that he has not seen a Pileated Woodpecker in a while. Without being prompted by a question, he remarked that the crest on the bird seemed “more pointed and longer” than the red crest on a Pileated Woodpecker. He also said that he thought the cheek and face of the bird looked black.

As he was sitting in a second location he saw the bird on a tree leaning sideways. It was there that he was able to watch the bird perched for seven to eight minutes. He said the bird continued to do the “tap tapping” as he sat there and he was able to watch the bird doing the “tap taps.” He said the noise was loud. And, although he couldn’t see the bird well enough to see exactly what it was doing between tapping, it looked like the bird might have been moving its head around on the trunk of the tree (foraging?). As the red-crested bird perched in the tree in his sight, another bird appeared. He said the bird came up to the male bird and didn’t appear to land on the trunk of the tree but “fluttered” around and made some “who eee who eee” noises at the male. He said that he thought it was a female because of the behavior. He was unable to describe this bird in detail and said he saw it for less than five seconds. He said it was the same size as the first bird and that it was a “large woodpecker that flashed black and white.” The second bird never appeared to land but kind of fluttered around the male. The second bird then flew off, dropping about a foot initially as it left the area and then flying away in direct flight. He did not see the male bird in flight and never saw it leave the area but when he tried to relocate the bird after the second bird flew off, he was unable to find it.

When I asked him about the neck and the back he did not say that he saw white lines or white coloration on the back. He said the back of the bird above the white on the lower back appeared to be
black to him, but he couldn’t really tell. He said what was most apparent to him was the large amount of white on the back of the bird as it was perched.

He made a sketch of the bird when he got home. He then went online to look at illustrations of Pileated and Ivory-billed woodpeckers and felt certain that the amount of white on the back meant what he had seen was an Ivory-billed Woodpecker and not a Pileated Woodpecker. He got much more excited after looking online. It is very good that he made sketches prior to looking at illustrations.

Allan Mueller of TNC, Steve Osborne of USFWS, and I followed up on Monday, 1 January 2007 by visiting the area and spending the day there. We spent the day sitting, watching, listening, and doing some hiking in the near vicinity of the encounters. We did not see anything. Later in the afternoon the three of us sat in different locations and listened and watched. At 4:45 pm, I heard a loud “crack” that I estimated was about 200 – 300 m away, and my immediate impression is that it was an Ivory-billed Woodpecker. There was absolutely no wind that day and the trees were not swaying. It is unlikely, in my opinion, that the noise was caused by a tree branch breaking. I notified Steve and Allan that I heard a possible double rap or rap and asked if they heard it which they did not. I did not hear two distinct raps but it seemed to be one loud crack to me. I made the decision to sit still and wait to see if I would hear more, rather walk in the direction of the sound (west of where I was sitting) and risk scaring a bird if there was one in the area. Three minutes later, at 4:48 p.m., Allan called Steve and me on the radio and said that he heard what he believed was a double rap. Allan described it as a distant double rap, with the first rap louder than the second rap. Allan heard this east of where he was sitting, so the sound did not come from the same direction or specific area of the loud crack that I heard. We left the area at about 5:15 p.m.

Additionally, this report occurs within about 1/2 to 1 mile of the boat ramp. Three other road “flyby” sightings have been reported since about August 2006. One flyway sighting occurred on Tower Road west of the boat ramp on 6 December 2006. It was one of the more impressive interviews.
I have conducted and I circulated that information to the group via email in December. Although only one field mark was mentioned, it was a very accurate description of a white trailing edge on a bird in flight. The other reports from Tower Road occurred on 8/20/06 and 11/6/2006. Allan Mueller has more information on these potential encounters and will route the information to the group.

Below are the written notes and report from Ross Everett for his 12/31/06 encounter at Wattensaw WMA.

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1-1-07

My name is Ross Everett, I am a duck hunter from Ward, Arkansas. On 12-31-06, yesterday, at approx. 10:45 a.m., I was at Wattensaw WMA. This was my first time in the WMA I was scouting the area. While looking for good duck habitat I found a dry spot between Wattensaw Bayou and the flooded timber.

I decided to sit down next to a tree and make some duck calls to see if there were any ducks back in the timber. I had been sitting there for about 20-30 minutes. I noticed some movement to my left and turned to look at it. I saw a very large woodpecker climbing to the side of a tree; it was at least crow sized. I had never seen a woodpecker that large, so I started to watch him as he hopped around the tree. He would peck at the tree and then appear to work at the bark. Every so often he would make a loud distinct double rap on the tree. The bird was a very deep black color, except for the very bright red crest on his head. The crest was very pointed and pronounced. The rest of his head was black. The only other color I saw on the bird was a very distinct white patch on the lower part of both wings (which were folded down to his body) and across his back.
IT GAVE THE APPEARANCE OF HIM WEARING A
WHITE SADDLE. I WAS, APPROX. 35 YARDS AWAY
FROM THE BIRD. I HAD BEEN WATCHING HIM FOR
ABOUT 6 - 6½ MINUTES, WHEN IT DAWNED ON ME
THAT THIS BIRD WAS LARGER, AND IN OTHER WAYS
DIFFERENT FROM ANY WOODPECKER I HAD SEEN. I DECIDED
TO CALL MY FRIEND, DON MACKENZIE, WHO IS A
WILDLIFE BIOLOGIST. I HAD BEEN TALKING TO DON
FOR ABOUT 2 MINUTES OR SO, DESCRIBING TO HIM
WHAT THE BIRD LOOKED LIKE AND WHAT IT WAS DOING.
DON KEPT SAYING THAT SOUNDS VERY INTERESTING, I
COULD HEAR HIS FAMILY IN THE BACKGROUND, LOOKING
FOR A BIRD BOOK. AT THAT POINT A SECOND BIRD
OF THE SAME SIZE, WITH BLACK AND WHITE COLORING
FLEW IN FROM BEHIND THE BIRD I HAD BEEN WATCHING.
THE SECOND BIRD MADE SEVERAL CALLS TO THE FIRST
BIRD AND BOTH FLEW OFF IN THE DIRECTION THE
SECOND BIRD CAME FROM. I STAY IN THE AREA
FOR ABOUT 4½ MINUTES BUT NEVER SAW EITHER ONE
AGAIN.
The following account was written up by the observer for a reported encounter that occurred on 25 May 2007. This is the same person with the above report from 21 December 2006

MARCH 25, 2007  8:35 A.M.

I ARRIVED AT CAMPGROUND AT APPROX. 8:20 AND STARTED TO GATHER SUPPLIES WHILE SITTING IN MY TRUCK. I STEPPED OUT OF MY TRUCK AND STARTED DOWN THE TRAIL LEADING OUT OF CAMPING AREA. I HAD STEPPED APPROX. 20 MAYBE 15 FEET OFF OF GRAVELLED CAMPING AREA, I REMEMBERED MY CIGARETTE AND STOPPED TO CHECK MY POCKETS. FROM ABOUT 30 FEET AWAY AND ABOVE ME I SAW A LARGE BLACK AND WHITE WOODPECKER LEAP AWAY AND DOWN FROM A TREE. THE BIRD SAILED FOR ABOUT 8-10 FEET AWAY FROM THE TREE, BEFORE STARTING LONG, SLOW AND DEEP WINGBEATS, CLIMBING SLIGHTLY. AS THE BIRD SAILED AWAY FROM THE TREE SHE TURNED HER HEAD TO LOOK IN MY DIRECTION AND I COULD SEE A LARGE, POINTED BLACK CREST. AT THIS POINT I COULD ALSO SEE THE UNDERSIDE OF THE WINGS. THEY HAD WHITE TRAILING EDGES, AND WHITE LEADING EDGES WITH A BLACK BAND RUNNING THROUGH THE MIDDLE AND EXPANDING AT THE TIPS. AS THE BIRD STARTED TO CLimb SLIGHTLY I COULD SEE THE TOP OF THE WINGS WHICH WERE BLACK WITH WHITE TRAILING EDGES. WHEN THE BIRD LEVELED OFF IT PROCEEDED WEST WITH A VERY STRAIGHT LEVEL FLIGHT. I WATCHED THE BIRD FOR ABOUT 200 YARDS BEFORE IT BANKED RIGHT OVER THE BAYOU AND OUT OF EYESIGHT. THE BIRD DID NOT MAKE ANY SOUNDS AND WAS NOT SEEN AFTERWARDS.
In a follow-up post, this information was provided.

The bottom of the wings was very easy to see because I was below it and it literally took a flying leap off the tree with wings outstretched for 8 to 10 feet before beating its wings and starting to climb. No not curved at all when she turned her head it was like a straight line carrying back off the head.

Prior to his report, he had posted the following regarding scaling and cavities in the same area. Not sure what species of tree it is that is being scaled here, but honey locust was mentioned in another post.

Allan Mueller, report sent via email for encounter at Wattensaw, 5/07/07

Hello, hello, hello,

Today, May 7, Steve Osborne and I put a jon boat in at the mouth of Wattensaw Bayou and went as far upstream as we could go. A very good trip that I highly recommend. On the way back we decided to stop at the Wattensaw Bottoms IBWO hot spot where we have been hearing all the kents and double knocks. While walking in from Wattensaw Bayou toward the White River, going east, Steve had a good feeling about a spot and decided to stop, while I continued east toward the hot spot. Below are my transcribed field notes.

5/7/07 -- 1210
Wattensaw Bottom at “Jason’s” PIWO nest
Walking slowly northeast looking at ASU camera boxes on the ground.
Looked up to see large bird flying 20-30 ft high toward me.
It turned right in a “U” turn to fly over the wet area. Continuous flapping, no sound. Nothing distinctive about flight.
Less than 100 ft from me

(Continued on next page.)
As it flew away saw very black front of top of wing + white trailing edge. More than 1/2 was black.

Total observation time 2-4 sec

Body black. Did not see underwing

Flying toward me, all I saw was a large bird.

Did not seem large compared to PIWO.

White trailing edge did not go all the way to the body.

The following is all added now at 2050 on May 7.

The intangible, unquantifiable element to this observation is the quality of the black on the wing. You have heard this before because it is true, the black was very deep, shiny black black. The white was pure white, but we have all seen bright white before; the black was deeper than I have ever seen before. The white trailing edge seemed to stop just short of going all the way to the body. The time that I saw the top of the wing was less than a second, so this is a detail that I could be wrong on, but that is what I remember.

The flight was level, but it was in a situation where a PIWO would also have been flying level - turning and only observed for a short distance. The bird did not land, but kept on flying. The U turn that the bird made was apparently caused by seeing me.

“Jason’s” PIWO nest is a PIWO nest that Jason Phillips found on April 30 that now has a camera on the cavity, put there by Brandon ??, a graduate student from Arkansas State University. Jason has photos of the two birds at that nest, and they both have normal PIWO plumage. Steve and I saw 6-8 PIWO’s during the day, so their image was fresh in my mind.

I did not see any red on the head of this bird, which means absolutely nothing; having poor color vision, red is difficult for me to detect.

This may be after-the-fact fantasy, but the bird seemed to be slimmer than a PIWO. As I said in my field notes, it did not appear to be notably big, but it was at least as big as a PIWO and slimmer, meaning wings that were either longer or narrower that a PIWO, and also a slim body. Clearly all of these size statements are judgments without anything to compare them to.

I had a camera in my hand, but the whole thing was over before I knew it happened. I did not think that this was an Ivory-billed until after I saw the top of the wing, and then it took a second for it to sink in - what I just saw perfectly matched an Ivory-bill.

Steve and I contacted Catherine Rideout and Jason Phillips, who joined us in blinds this evening at the hot spot. We did not detect anything, but had to leave early because of a storm.

I now know the simple two step secret to seeing an Ivory-billed Woodpecker -

1. Get out in the woods.
2. Get lucky.

How certain am I that this was an Ivory-bill? If I was on a Christmas Count and Ivory-bills were common in the area, I would add this bird to the list. Is it on my list list? Not yet, but I am about to convince myself that it should be. This is a class three observation - only one field mark, the top of the wing.

I am sending this email from home where I do not have addresses for everyone who needs to see this. Please forward it to the folks I have missed.

Please send me any comments and/or questions.

Allan