

# SECOND FLORIDA BREEDING BIRD ATLAS

Handbook for Cooperators



Florida Ornithological Society

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## INTRODUCTION

### Why should you help with a Second Florida Breeding Bird Atlas? (BBA II)

Atlas surveys are fun, much like any birding trip. They involve keeping a list of birds you see, and trying to find as many kinds as you can; just like a Christmas Bird Count but easier, or a big day but not all day, or a trip to a wildlife refuge. It is done on your own time schedule. It's birding with a purpose!

This is what we will produce while putting our birding skills into play:

- Updated distribution maps of breeding birds in Florida showing the effects of conservation policies, population growth, and other factors on Florida's birdlife.
- Change maps highlighting how much the breeding distribution of each species has changed in the past 25 years.
- Relative abundance maps showing the principal ranges of species in Florida.
- Comparison of BBA changes with trends revealed by the Breeding Bird Survey.
- Breeding chronology information specific to birds in Florida. We know this chronology sometimes differs from the rest of the continent, but often can't say exactly how.
- Specific location information on a score of species of conservation interest.

We are all volunteers! So we will not be competing for scarce conservation funds needed for other conservation initiatives. Our first Atlas was funded with more than a half million dollars, and some recent atlases in the Northeast have exceeded \$2 million! Running this project without funding is our gift to conservation. We can do it, and it falls squarely within the FOS and Audubon objectives.

We need your help! We will provide a field card and a map for your very own piece of Florida, and we'll get you started.

## SUMMARY OF THE BIRDING PROTOCOL

### **Species list -- Breeding evidence -- Focal species -- Change map -- Missed species in the Quad -- (Miniroutes)**

The birding part of this project comprises several parallel activities for each quad.

1. Building a **species list** as complete as you can in the SE (#6) Block (like a CBC territory). This is our all-important random sample. Recording numbers of common species is not required. The list is built cumulatively through 2016, so annual surveys from scratch are not needed.
2. Note **breeding evidence** as you see it. Nest searching (beyond a minute or two) is not part of the atlas, but finding a nest is sometimes a reward. We set no specific breeding confirmation goals, but would like about 50% of the species either "Probable" or "Confirmed".
3. Gathering breeding locations, number and additional breeding evidence on twenty relatively uncommon **Focal Species**. This is useful information for conservation planning: a courtesy part of the Project, not a planned part of our expected publication.
4. If, and only if, the SE Block was not well covered\* during the first atlas, then also atlas the best covered block from the first atlas. Do not sacrifice thorough coverage of the SE block to accomplish this. This is for our **change map**, comparing distributional changes in the past 25 years. \*The absence of many common species and no nocturnal species from the first atlas data is an indicator of poor coverage, but check by local inquiry for habitat remediation. For example, transition from a ditched pine plantation to partly-flooded open woodland would add diversity and the block should be used for comparison. External factors such improved access, resulting in a greatly increased number of species, is reason to select another block for a fair comparison.
5. **Go birding in the rest** of the Quad covering selective habitats to find species absent from the SE Block. This will allow us to prepare Quad-level maps, such as were presented in the First Atlas. It takes the place of Atlasing a second and third block in a Quad as we did in the First Atlas. This is like "afternoon" coverage in some CBCs, where we go back out and search for missed species before the day is over. Remember, it is far, far more important to find new species in the SE block than elsewhere.
6. **Optional but really needed:** As a parallel project, run 15-stop **miniroutes** in the SE Block of each Quad. This is not required of those atlasers not familiar with point counts. We will get the miniroutes run some way so that we can make relative abundance maps for many species. If one person were to run a miniroute every day for the full 50-day season allowed for miniroutes, it would take 20 man-seasons to achieve coverage of the 1000 needed miniroutes. Every route run is a crucial contribution.

## OBJECTIVES OF THE SECOND FLORIDA BREEDING BIRD ATLAS

### FIELD STUDIES

1. To provide a 16% sample of reliably studied areas (11-square-mile Blocks) useful for statistical projections and range comparisons with both the last and the next atlases. (Atlas Sample.)
2. To provide additional information on breeding chronology, nesting, and habitat requirements for Florida's breeding birds. Twenty species of conservation interest (Focal Species) will be emphasized, with numbers and precise locations cataloged for this group of species.
3. To determine and map the distribution species breeding in Florida based 65 square mile USGS Quadrangles.
4. To provide a reliable data base useful for mapping and for making sound natural resource use decisions in Florida, to be filed with interested Florida organizations and, on a national level, with USGS/Patuxent Wildlife Research Center.
5. To involve birders, biologists, students, land owners and interested citizens in a directed, cooperative, educational and fascinating research project.

6. To work with land owners and land stewards so as to serve as ambassadors to the community at large.
7. To see the field project through to a timely conclusion.
8. As a parallel project, develop semi-quantitative information on relative abundance of many species using miniroutes consisting of fifteen 3-minute roadside point counts in the same Blocks chosen for the Atlas sample.

## ANALYSIS AND PUBLICATION

1. As a following project, analyze the database developed for conservation information, particularly for species of conservation concern.
2. As a following project, publish in a timely fashion the results of the Atlas on the Internet, including distribution, distribution changes, and analyses.
3. As a following project, publish a book of the results containing, at a minimum, the maps.

We plan to accomplish these field and publication objectives in an economical way so as to not unduly draw funds and manpower from other valuable conservation initiatives.

## ATLAS GRID, ATLAS PLAN AND MAPS

The Florida Breeding Bird Atlas is a grid-based survey of the bird species breeding in Florida. The grid used for this project is based on US Geological Survey 7.5-minute topographic quadrangles (Quads). Each Quad is broken into six survey Blocks. The blocks in the SE corner of each quad are chosen as Sample Blocks for statistical study. Their centers are 7.5 minutes apart in latitude and longitude and are designated as priority blocks. Additionally, when the SE block was not adequately covered in BBA I, a well-covered block from BBA I is designated as priority so that a matched pair of blocks from every quad can be used for analyses of change over the past 25 years. These Blocks are all 2.5 minutes latitude (N-S) and 3.75 minutes Longitude (E-W). In terms of distance they are 2.88 miles N-S and vary with latitude from 3.7 miles E-W north of Pensacola to 3.9 miles in the southern Everglades. The areas vary from 10.7 square miles to 11.2 square miles. They are considered comparable to the nominal 10 square mile (25 square kilometer) blocks used in much of North America.

Florida is contained partially or entirely within about 1039 Quads, as shown in the in the [PDF of the USGS Florida Index Map](#). Access the USGS Florida Index Map via the FOS web site; partly enlarge the map to navigate to your county. Then enlarge it more to figure out the Quad locations within the county and the name of the Quad that interests you the most. You can then go to the USGS's BBA Florida Atlas page to view and print your map. Remember, we are doing the #6 Block (SE) first in each Quad. You can choose any unstudied Quad you want or add to one not completed if not being currently studied by another Atlaser. (See USGS Web Site for status/results of each block for both atlas projects.) Once you have selected a Quad, email your selection to the County or Regional Coordinator or [RickLWest@aol.com](mailto:RickLWest@aol.com) to be sure you have exclusive possession to this piece of Florida to survey. (See list of coordinators.) You will be given an Observer ID that will allow you to access the website for data entry when you are assigned a Block [and Quad].

Inexpensive county map are available from the Florida DOT at <http://www.dot.state.fl.us/mapsandpublications/> or by calling 850/414-4050 for assistance. Also the FL DeLorme Atlas and Gazetteer, available from bookstores, is very useful but costs \$20. Both have tic marks on the borders to allow you to grid the maps into 7.5 minute Quads and subdivide them into blocks. This Gazetteer also has small + marks at the Quad corners. Also Rick West has emailed 8.5 x 11 inch Quad road maps with the block boundaries to many county coordinators, and can continue to do so when asked. Even more informative are electronic overlays for Google Earth provided by David Simpson ([simpsondavid@mac.com](mailto:simpsondavid@mac.com)) providing Quad name and coordinates and Block boundaries plus all the mapping strengths of Google Earth. Your county Coordinator can email this Google Earth overlay upon request.

### Arrangement of blocks:

1 (NW)	4 (NE)
2 (CW)	5 (CE)
3 (SW)	6 (SE)

Block maps for all Blocks in Florida are available at the USGS/Patuxent web site in either road map format or as a satellite view.

## Definitions

BBA I – The first Florida Breeding Bird Atlas, begun in 1986.

BBA II – The current Atlas, begun with data from 2011.

Quad – A US Geological Survey topographic map (Quadrangle) in the 7.5 minute series. Florida is mapped on 1027 Quadrangles.

Block – One-sixth of a Quad, covering a little more than 10 square miles. This is our survey unit, and all observations must include the Block within which the bird was found. The Blocks are named from the name of the Quad plus an indicator of the position of the Block within the Quad (usually numbered from 1-6, or by direction: NW, CW, SW, NE, CE and SE).

Sample Block – The SE block of every Quad. Although this sample is designated in a systematic way, it serves as random sample useful for predicting the frequency each species occurs in the unsurveyed blocks. If the SE blocks falls over water or mainly over water, it is still the Sample Block.

Comparison Blocks – Pairs of well-covered Blocks from BBA II whose results that can be compared with that from BBA I to elucidate distribution changes from 1976. This is usually the SE Block, except in those cases where the SE block was not well covered, and another block was.

Priority Blocks – Sum of Statistical Sample and some added Comparison Blocks.

### Atlas Minimum Field Goals

We will resurvey the SE Block of every USGS Quad covering Florida. In the event the SE Block is entirely over water then resurvey the next Block that was selected in the first Atlas for thorough study; develop a species list of approximately the same number (+/- 10%) as on the first atlas. If the SE Block is available, but was not covered in the first Atlas, it should be thoroughly covered, even if it has very little land area. Collect breeding evidence so that ideally 50% of the species are at the Probable or Confirmed level somewhere in each Quad. For many observers this is expected to require at least two early morning visits during the breeding season, and usually will require some follow-up to locate additional species in other habitats. The Regional Goal is to achieve the same number of Species X Priority Blocks as was accomplished in the first Atlas (+/- about 2%) so that valid comparison can be made between the two atlases. We will briefly survey some other habitats in the rest of the Quad to add species not breeding in the sampled Blocks to approximately the same number of species in the Quad (+/- 10%) as in BBA I. The Regional and State Goals are to be within +/- 2%. These goals are selected as an indicator that the comparisons are base on approximately equal effort.

When is a Priority Block Done? Several guides should be used to decide when you we have satisfactory coverage. The primary guide is if you have covered all the habitats present during the time the birds are breeding and also tried for nocturnal species, then you have had an opportunity to find most of the species present (say more than 75% of the expected species). A second indicator is if you have reached about the same number of breeding species reported in BBA I, then you are done, with the proviso that it was carefully covered in BBA I. We don't want BBA II to be significantly different in effort of building species lists from that of BBA I. We do want the list to be suitable for comparison if a third atlas is run 25 years from now. We don't know how many hours were expended in each block on BBA I, nor the dates atlasing trips, nor by whom, but we will leave that type of information for the next atlas. One way of getting good coverage is to have the block atlased by one observer and then have some coverage for new species by a different observer. This combination of observers with different skills using different techniques proved to exceed the results of BBA I with as little as 6 hours of field effort in several blocks partly covered at the 2012 FOS meeting. Normally about 15 - 20 hours (3 mornings) effort is required, depending on the observer.

Some additional blocks are also designated as priority because the SE Block was not well covered in BBA I. In those few instances, another, second, block must also be designated as priority. In these few blocks the target number of species is approximately the same number of species reported in BBA I in similar blocks – really whatever you can find in 2 or 3 trips.

For non-priority blocks: after you have covered the Priority Block, cover habitats not present in the priority block, looking for species not already found. The total species list for the quadrangle should approximately equal the number\* reported on BBA I. The prediction of what would have been revealed if every block had been covered will be based on primarily on what is reported in the set of all the SE blocks. (\*Number of species per block is an average; some individual blocks may vary widely between the atlases in the number of species reported, as they did in the second Maryland and New York atlases.)

**Missed Species are a mark of success!** Atlasers always miss some species, and say after the end of a trip in a priority block, I can't imagine how I missed that species. This may particularly arise on a second atlas, in which you have available a list of species reported on the first atlas. Try on a second day, but don't feel bad. The object of the second atlas is a comparison with the first one, so if a species has decreased in abundance, and you have tried for it and missed; that is OK. In fact that is a primary objective! That just suggests that this species has become sufficiently scarce that it was not found after a reasonable effort. You will also find common species that were missed in BBA I. Just accept that and move on. Under no circumstances should you add a species because you "know it is present". Such an action would ruin the results for you and for everyone else who has worked so hard, and later for those that use the information.



## SELECTION OF BLOCK(S) TO COVER.

**A systematic sample of one block out of six.** We are committed to covering the SE Block (Block 6) of the 1027 Quads that fall within the boundaries of Florida. Where the SE Block falls entirely over water it is still our “sample”, we will cover the best-covered Block, usually Block 5 (CE) so that we have a sample from each Quad. When the SE Block contains only a little land (an island, bit of beach, or sliver south of Georgia) we will still cover it for the few species it contains, but then cover a lower numbered block that is expected to have a robust number of species (priority: 6 – 5 – 2 – 1 – 4 – 3; the 4 and 3 blocks are adjacent to the 6 blocks in neighboring quads and are to be avoided, where possible.) When we have done this, we have completed the coverage commitment of the project. When the #6 Block is inaccessible because it is on private land for which permission to enter is unobtainable, please notify the State Coordinator. This sample of one Block out of six reduces our field requirements, but the sampled Blocks need to be covered thoroughly.

**Matched paired sample with the first atlas.** If the SE Block (Block 6) was not thoroughly covered during the first atlas, please also select a well-covered block from the first atlas, and cover it well for the purpose of comparing our results with those of the first atlas. In general, “not well covered” means a number of common species not reported, and considerably fewer than you found on the second atlas. This alternate-block-for-comparison should be covered approximately as well (in terms of number of species reported) as it was covered the first time.

**Missed species – a primary objective.** In Atlasing one always seems to miss a few species that really “should be out there.” The Atlasing ground rules are that you should make a couple of thorough visits at the proper time of year when the birds are active. Then a follow-up visit or two should be made expressly to find additional species that might be present, such as nocturnal and wetland species. After you have done that and reached the point of diminishing returns, you have done everything we hoped you would do. This is the Atlas method; it does not guarantee that you have located ever species present as long as you have made a good try in the various habitats. This time around, you have the 1986 list for comparison. Now, a missed species is exactly what we are looking for – a few species have become sufficiently scarce that you do not locate them (even if they might have been present). Also maybe a few species have become more common. So please regard “missed species” as a substantial victory and primary objective, not a drawback.

**Miniroutes in the SE Blocks.** Running miniroutes (routes of 15 point counts) is a parallel part of the Atlas, and is not required or expected from many atlasers. Some very good atlasers will not be doing miniroutes out of preference or necessity. This particularly applies to those is limited hearing or ability to distinguish similar bird calls when many are calling at once. Those “visual birders” are excellent atlasers because they often are much better at confirming breeding. Please see the Quantitative Method Protocol Booklet if you can possibly help. To complete it requires 20 man-seasons so each route run is valuable to us.

**Atlasing additional blocks.** Really not needed, but if in your neighborhood, why not? All data from all blocks that you cover and post will be compiled and available for our analyses. They will be included in information downloaded by researchers doing other studies. So you are welcome to thoroughly atlas additional blocks, such as your home block. It will be appreciated, but please understand it is also a digression for the thorough coverage of all of the SE Blocks, which must be completed to a high standard.

**Cruising the Quad for New, Focal and Uncommon Species.** After the #6 block (and an additional block-for-comparison with the prior Atlas, if needed) have been well covered, please drive the other blocks looking for additional habitats (1) primarily to find species not reported so far in the quad, (2) to make additional detections of the 20 Focal Species (please, everyone, read the Focal Species section), and (3) make additional detections of uncommon species whose report will help define their state distribution. These additional reports from cruising must be reported in the block where found, not just as “found in the Quad.” Repeated reports and confirmation of common species in all six blocks is not necessary or even encouraged. We infer the same information from statistical analyses which is

sufficient for mapping, for conservation planning, for much research and analyses, and in court, if some environmental issue is decided there.

## FOCAL SPECIES

These reports are not intended to duplicate FWC and other studies, but rather to fill in the gaps of those focused surveys. So please do not invade posted coastal areas to find sensitive beach nesters; we will rely on the shorebird survey data for that. We will post the FWC data as they become available so you will know what has already been reported on this survey. The same goes for Eagle nests and heronries that are under surveillance, etc. Reports without specific breeding information are usually of little use. No need to make special Focal Species reports on foraging colonial birds away from their breeding areas, such as Pelicans, for which you use "O" as the breeding code. If a Focal Species, such as Sandhill Crane, is quite common in your Block or Quad, please just submit a summary report. It would be asking too much to record details on each pair where they are common nesters.

Record significant Focal Species information, and information on other species, at this site for Rare and Focal Species:

<https://docs.google.com/spreadsheets/viewform?formkey=dG1SQ3NFSU9sWHk4Z0dWRVF0U0s1aWc6MQ>

(You should also record these observations as usual in the atlas database.)

Additional information is sought on these 20 "Focal Species" to supplement your usual brief report submitted to the database. (Most blocks will contain no Focal species that need reporting.)

Brown Pelican (at colony)	Wilson's Plover
Reddish Egret (colony)	American Oystercatcher
Roseate Spoonbill (colony)	Least Tern (colony)
Snail Kite	Black Skimmer (colony)
Short-tailed Hawk	White-crowned Pigeon (colony).
American Kestrel	Mangrove Cuckoo
Black Rail	Burrowing Owl
Limpkin	Marsh Wren
Sandhill Crane	Seaside Sparrow
Snowy Plover	Painted Bunting

What we need differs with the species but, in general, we need location, and numbers only at breeding sites. If reporting becomes a burden, please consider reporting only the ones which seem important to you. We do not need additional information for fly-by observations of any waterbird.

These three land bird species are under FWC study. Please post at a FWC site\* when it becomes available.

American Kestrel  
Burrowing Owl  
Painted Bunting

\* <https://public.myfwc.com/hsc/...>

\* Not yet ready.

Breeding sites (rookeries) for the four colonial species listed below only if they are not already being monitored. Do not intrude onto monitored sites. Provide location, breeding evidence, and estimated number for each species.

Brown Pelican

Reddish Egret

Roseate Spoonbill

Limkin (North Florida only, Regions 1-4.)

Shorebirds, but only at breeding sites not being covered/posted by the Shorebird Alliance or Audubon of Florida:

Snowy Plover

Least Tern

Wilson's Plover

Black Skimmer

American Oystercatcher

Scarce Raptors: Snail Kite and Short-tailed Hawk

Other Focal Species (report suspected Breeding sites only)

Sandhill Crane (only Regions 1-4 )

Mangrove Cuckoo

Black Rail (all locations)

Marsh Wren

White-crowned Pigeon

Seaside Sparrow

Non-focal species.

This system, now that it is set up, can be used for other rare species, such as Neotropic Cormorant, Horned Lark, Bronzed Cowbird, and other species not expected to breed in Florida.

Added locations, numbers or other information on scarce non-native species, like Egyptian Goose, may also be entered on the FOS Rare and Focal Species form.

Photographs are desirable for unexpected species, such as parrots, outside their historical breeding locations

This system can also be used to provide details for any species far outside its expected range. In this case, you should provide additional information, including how it was identified.

Record these species each time you encounter them, giving **location, number, and breeding evidence.**

## SAFE DATES

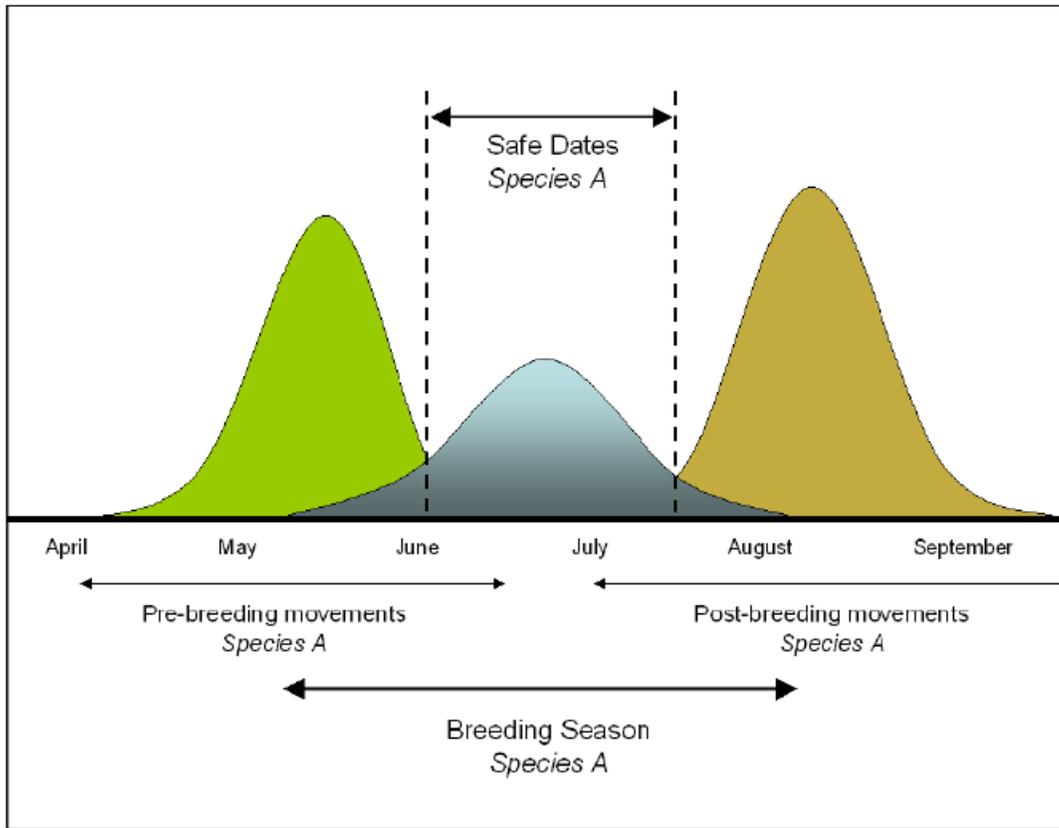


Figure courtesy of 2<sup>nd</sup> Pennsylvania BBA

Notice two important points from this diagram. The breeding season is always broader than the Safe Dates, so breeding evidence ALWAYS TRUMPS safe dates. Use Safe Dates when you have no direct breeding evidence.

Safe Dates is only an approximation, but we have to somehow eliminate non-breeding birds from our observations.

It has been found that breeding activity varies 10 to 15 days for every 5 degrees change in latitude (Don and Lillian Stokes). So within Florida's 7 degree range we can expect a couple of weeks' variation in breeding activity. The spring migration is quite compressed, with less than 2 weeks state-wide differences. Overall, the Safe Dates are just estimations for the bulk of the bird population in Florida – it is the best guideline we have. Please don't "game" the safe dates – if you pretty sure an out-of-place bird is a migrant, just enter it as "O", a non-breeding visitor.

Safe Dates are tabulated on the USGS/PWRC home page under "Species Info". The source of the Safe Date ranges is the First Florida Breeding Bird Atlas. Since we are comparing species data between the two atlases, we have elected to keep the same Safe Date ranges, even if some object to them. *it is wise to keep this part of the Atlas constant.*

Some species do not have stated Safe Dates. Many of these species are colonial, and they forage widely away from their nests. So seeing a foraging bird does not mean it is a local bird. You should try to confirm these birds, is it best to try to confirm them. Otherwise enter them as "O". We still need this information, because they define the foraging areas. Also a cluster of "Os" on the map strongly suggest some local breeding.

## BREEDING CODES

### OB CATEGORY - OBSERVED: NO LOCAL BREEDING EVIDENCE

O Species (male or female) observed in a block during its breeding season with no evidence of breeding. It is primarily for colonial breeders, but includes wide ranging foraging species such as soaring vultures and those attracted to a food source or some raptors flying high (such as kites, ospreys and eagles), or colonial nesting species not at a nesting colony, including Purple Martins away from potential breeding sites such as foraging over forests. Use SH for vultures or herons only when you can point out the specific location where it probably nests. Low kites and other raptors can be coded SH, but vultures that might be descending for food cannot.

### PO CATEGORY - POSSIBLE BREEDING EVIDENCE

SH Species (male or female) observed in suitable nesting habitat during safe dates. This is the default code for most species.

SM Singing male present, or breeding season calls (or drumming by woodpeckers) heard, in suitable nesting habitat in breeding season during safe dates. It includes vocalizing non-passerines.

### PR CATEGORY - PROBABLE BREEDING EVIDENCE

S 7 or more territorial males observed on a single birding trip during Safe Dates.

S = seven discrete observations of a species – usually singing males (not flocks, nor colonies, nor family groups, nor a concentrated group of migrants) in a single birding trip. Two trips cannot be combined to satisfy this code. This code is reserved for really common territorial species (most are territorial) so you do not have to stop and seek a higher breeding code. That way you get quick “Probable” codes for Cardinals, Wrens, Towhees, etc, without stopping to look for and follow a bird for a while. It is merely an effort-saving code to redirect your attention to less common species, where upgrading serves to add reliability to the breeding observation. This code will not be accepted by some users of the data because it is not a standard code, but it makes good practical sense. When a higher code is available do not use “S”.

P Pair observed in suitable nesting habitat during its breeding season.

T Permanent territory presumed through either defense (e.g. chasing of other birds), or song at same location on at least 2 occasions 7 days or more apart. T = two observations in the same location, that is, the same territory, but not necessarily in the same bush both times.

C Courtship behavior or copulation.

V Visiting probable nest site, or nest building by wrens or woodpeckers (who build nests they do not use for breeding).

A Agitated behavior or anxiety calls from adult.

B Brood patch or cloacal protuberance.

### CO CATEGORY - CONFIRMED EVIDENCE OF BREEDING

NB Nest building or excavation of nest cavity by any species except wrens and woodpeckers, or adults carrying nest material excluding far-ranging species.

DD Distraction display or injury feigning, or attacking humans or other predators.

NU Used nests or egg shells found. Must be carefully identified, if they are to be accepted.

FE Female with egg in oviduct. (For banders.)

FY Recently fledged young or downy young incapable of sustained flight.

CF Carrying food for young (not carrying food to a perch for its own consumption).

- ON Adults entering or leaving a nest site in circumstances indicating occupied nest. To be used for nests which are too high (e.g. the tops of trees) or enclosed (e.g. chimneys) for the contents to be seen.
- FS Adult carrying fecal sac.
- IP Incubating position of bird (brooding, on eggs, or laying).
- NE Nest with egg(s), but IP is satisfactory so as to not disturb a bird on its nest.
- NY Nest with young seen or heard, or identifiable dead nestlings found.
- Cowbird egg or young also confirms the host species.

## Other Data Sources

Experience shows that the bulk of an Atlas project is accomplished by focused birding in assigned blocks (mostly SE blocks in Florida) and we will need a constant stream of cooperators each year, particularly May through July. We also need data from many other sources.

### “SECOND-HAND” SPECIES.

Field contacts while you atlas are invaluable. Most landowners and others you can meet in the field may provide a number of added species and upgrades if you very carefully interview them (just passing conversation as far as they are concerned).

Always refer to the project as a “state-wide wildlife survey for birds”, which it is! If you knock on doors, try to pick a home with a martin or bluebird house, and bird feeder or hummingbird feeder, or even a flower garden. Or a home where someone is already working outdoors. After introducing yourself, your objective is to get Species and Date. If they cannot give you even an approximate date, the record was probably worthless anyway, but don't give up too soon. Try 'end of school', 'start or end of turkey season', or on a 'weekend? – about how many weeks ago?' Observations since 2011 count, but beware of long memories: you may be told something that happened 20 years ago.

Some possible interview subjects are --- Turkey, Bobwhite (quail), hummers at feeders or flowers or at a neighbor's, hoot owls - particularly if you have a recording right in your hand, Chuck-wills-widow (whip-poor-wills), Permission to go on promising land, Feeder birds (does a neighbor have a feeder?), Chimney Swifts (sweeps) perhaps at a neighbor's house, bluebirds, Purple Martins or at a neighbor's, Nighthawks (bullbats), cranes high up in trees (heronries), ... any bird's nests?, Hawk's nests?, Killdeer (killdees), ponds back in the woods or in the area?

Listen, listen, listen. Don't lead and never correct or argue, but carefully probe. Remember you're are a tourist and they live there. People living in the country often know their birds well, but use different names: for example, don't bother to correct house wren to Carolina Wren. And don't be surprised if they have information on a species you would not think they would recognize. When you get back to your car or out of sight, write everything down and brutally eliminate anything you are not confident about. When entering the results, use the date of the informant's sighting, not the date of your conversation. Informant's names or locations should be entered in the trip details on the page where time entry is required.

Second hand species are also available from friends, neighbors and coworkers.

### INCIDENTAL SIGHTINGS.

Anyone can help add species. Nocturnal species can save a trip (that may never be taken) to add these species. Confirmations help add quality to the data. Observations in Blocks 1-5 of species not expected in the Sampled Block-6 are essential for the Quad level map we will prepare.

### BREEDING BIRD SURVEY.

As time allows, we will add BBS data to the database, and use some of the point counts supplement miniroute data.

Note to those running BBS routes: breeding codes at the Probable and Confirmed levels may noted on your margins along with the Stop Number, and then either posted yourself or sent to someone who has access to the database. This can be done for Miniroutes also.

### BIRD REHABILITATION CENTERS.

Bird rehabbers usually get many nestlings and recently fledged young. They (probably) keep a case sheet on each individual. Included in it may be (1) a case number, (2) a general age assessment, weight, condition, (3) when it was found (watch out sometimes a chick is brought in days after it was first

picked up), from which you can extract a date, and (4) where it was found (needed to return it to the wild) but the location may be that of an intermediary, and is a local place name that takes local knowledge to properly place within a specific atlas block. For each clutch with unambiguous information and sufficient interest, please record Institution and (1) case number, (2) breeding code (NY, FY), (3) date, and (4) Block. This becomes a guilt-edged Confirmation.

Advantages: The first case I recorded in Alabama was of four Woodcock chicks in January! Owl chicks tend to fall out of nests. Wood Ducklings are common. Young Night-Herons are often injured before they achieve sustained flight.

Drawbacks: The cases tend to cluster near the rehab center in popular spots. Cardinals, Blue Jays and the like appear over and over. Placing the pickup location is often tedious, and you don't know how useful the case is until you have solved the placement details.

## EBIRD REPORTS – FOR EBIRDERS

eBirders who also have a password are encouraged to enter their own Incidental Observations. Some atlasers use eBird to accumulate their atlas data during the season.

This section is for eBirders who are not otherwise participating in BBA II. You can contribute and we value your contributions.

Some preparation is required because an Atlas is strictly location specific and eBird sites often follow boundaries of birding areas that overlay more than one Atlas Block. If eBirders take the all-important simple preliminary step of subdividing their eBird sites at block boundaries they can easily contribute. eBird specifically encourages use of multiple smaller site sizes. Reports that do not provide a single Block location confound the information and are no use for the Atlas. You can use the eBird breeding codes, which can easily be transformed into the corresponding Florida codes.

First, you must divide your eBird locations into specific 11-sq-mile units that conform to units we use – we call them Blocks. Block names take their names from the names of the USGS topo maps (Quadrangles or Quads). If you do not know a location name, please look it up on the Florida Quad Index Map posted on the FOS web site (or I can email you a Quad index for a county.) Once the quad name is known, you can estimate your birding location by looking on the DeLorme Gazetteer (which has 12 Quads per page with very inconspicuous tick marks marking the Quad boundaries.) To verify the Block boundaries within a quad, please pull up the “Block Maps” provided on the USGS web site; select Quad Name and Block –

[http://www.pwrc.usgs.gov/bba/index.cfm?fa=explore.ProjectHome&BBA\\_ID=FL2011](http://www.pwrc.usgs.gov/bba/index.cfm?fa=explore.ProjectHome&BBA_ID=FL2011).

Using these Block Maps as a guide, you can now restrict an eBird report to ONLY refer to sightings within a single Block. Please identify your report with a Block name, email it to [ricklwest@aol.com](mailto:ricklwest@aol.com) with the subject “eBird report for BBA” and it will be useful to us without any added effort on your part.

To have your information more valuable to us and interesting to you --

1. Add any breeding behavior/information you happen to see. A key to the breeding information can be obtained from the same USGS site; see Breeding Codes under “Methods” (or just say what you saw.)
2. Include reports only for species breeding in Florida. IF you don't see specific breeding information, include reports during dates ranges when most individuals of that species is securely on their breeding territories. See “Species Info” on same web site; these date ranges are known as “Safe Dates.” Simple eBird observations during Safe Dates are useful to us.
3. See how much we need your information by checking “Results – by Block” and select Quad Name and Block on the same web site. Compare your sightings with those we have entered for BBA II, and also notice observations listed for the same Block 25 years ago!

To save your time, we only need one report per species per Block for anytime through 2016 – multiple reports are not needed, but those reports with the most definitive breeding observation will be used.

4. While you are on this web site, view our evolving species maps. The accumulated reports hint at the final results, and vast white spaces cry out for added eBird reports (and atlasing.) Check the maps for BB Whistling Duck (133 reports at this writing) because it is interesting, and M Dove (740 reports) for a current measure and location of our efforts.

## PROFESSIONAL STUDIES.

FWC data was poured into BBA I, and should be for BBA II. Usually our limited use of their data is permitted.

Audubon Heronry monitoring

Eaglewatch, Audubon and state.

Shorebird Alliance data

Species Studies: WOST, SNKI, CRCA, WHCR, BUOW, RCWO, FSJA, GRSP, PABU and others?

We will access these directly and add them to the data base directly. Only some RCWO data has been added so far.

Smaller academic studies on other species, where nest locations are recorded.

USFS and National Park point counts and other location specific data.

Wildlife surveys on specific tracts of land provided they can be parsed into discrete Atlas blocks.

These data are entered as Incidental Observations using the “Professional designation”.

## WEB SITE AND DATA ENTRY

### FEATURES OF THE USGS WEB SITE

A big feature of BBA II is the database management provided without charge by the Patuxant Wildlife Research Center. We agreed to provide the needed tables specific for Florida, and they would provide all the data management and feedback to run an exciting project.

### FOR ALL VISITORS TO THE WEB SITE, IT INCLUDES --

Basic Atlas procedures, Breeding Codes, and Breeding Species list including Safe Dates and 4-letter codes for each.

Road and satellite maps of each block provided by the US Geological Survey.

Ongoing almost real time results by Block, by Species (mapped!), cumulative County Lists and the cumulative State list.

Comparison of current results with results recorded 25 years ago for each Block.

### FOR THOSE WHO PARTICIPATE AND HAVE AN OBSERVER ID TO LET THEM IN --

#### For Atlasers

Data entry by the atlasers themselves with attendant quality assurance.

List of Blocks each atlaser is birding with their cumulative results.

Cumulative lists of their time spent, mileage driven.

Comparison of their results with that of 25 years ago, including a “missed” list.

Opportunity to download your own results organized onto a spread sheet.

#### For Coordinators

Lists of participants and their email addresses.

Opportunity to see and question the current results before they are made public.  
Who has been assigned to each block and for which years.  
Downloadable data of all results for county.

Entering Incidental Observations on the website

Go to [http://www.pwrc.usgs.gov/bba/index.cfm?fa=explore.ProjectHome&BBA\\_ID=FL2011](http://www.pwrc.usgs.gov/bba/index.cfm?fa=explore.ProjectHome&BBA_ID=FL2011)

When you log in you will be on the "My Atlas View" screen. Toward the bottom is a place to enter incidental observations "Enter New [Incidental >>](#)". Click on [Incidental](#). On the next screen select your name, enter Quad name and select the proper the Block number. Neither Location nor Time are required, but may be useful. Click "Continue". On the next screen scroll down to the species, enter the breeding code in the correct column, and the date (dd/mm) in last column. Scroll down to the bottom of the list and click Save. Then, if the report looks OK, click "Finalize".

## ENTERING DATA ON AN ASSIGNED FIELD CARD

Log in (top right) by clicking on it. On the next screen and enter your name and observer code.

Name1 Name2

Observer Code: XXXXXX

Click on GO

A screen called "My Atlas view" will appear; it lists blocks assigned to you and reports you make.

Click on a Block name, in the START CARD

An effort screen comes up. Enter dates of your trips. The only required field is hours (spent atlasing in the block)

The EFFORT SCREEN also provides a document number. WRITE THAT ON YOU FIELD CARD/NOTEBOOK. IT MAY BE BECESSARY FOR DATA CHECKING LATER.

Fill in as much as you can, following instructions. Don't sweat the details, but remember to record them next year. For your home block, just write in an estimated number of hours, and nothing else. (see examples at the bottom of the screen)

Click GO to bring up a species list.

Enter code and dates, remembering that the codes have to be in the correct columns. If you make a mistake and put the code in the wrong column or enter a code wrong, the program will remind you (as it did for me!)

When you have posted your data click on SAVE. That brings up a summary for checking. You can easily go back to the species entry form at will.

Save you results, but don't finalize them yet, just in case you get more data.

Finalize your cards in August or when you have finished a Block for the year -- that is like mailing them in. You can't add any more without either contacting your coordinator or entering an incidental.

Carefully file and save your handwritten notes until the project is over. We reserve the right to ask for these originals, but I hope we won't really have to do that, and put you to the trouble.

If you make good observations in other blocks, record them using the Incidentals method (below the field card information). You should make a point of deliberately entering at least one incidental observation to see how it works. It is like sending me a note for a good observation. It will have a document number also.

## DATA MANAGEMENT FOR COORDINATORS

Coordinators have an additional set of screens and tasks --.

Enter observers into the database

Assign Blocks

Encourage atlasers

Review finalized data so it may be displayed for all.

## INCOME TAX DEDUCTIONS

Under current tax law, your mileage and expenses while away from home may be tax deductible if this was the primary reason for your trip. Advice from your accountant is necessary.

## APPENDIX

### SPECIES ACCOUNTS

[This section contains thought concerning breeding codes and breeding behavior. Anyone having tips concerning accurate or more productive atlasing is invited to email their ideas to Rick, to be included in the next revision.]

#### EGYPTIAN GOOSE AND OTHER SCARCE NON-NATIVE SPECIES.

Egyptian geese have a substantial feral population in Miami-Dade, Broward, and Palm-Beach counties. They are certainly breeding and could possibly be considered established in the area. There are a lot of reports outside of that area particularly along the east coast to north central Brevard County, Hillsborough and Pinellas counties, and northern Lake and southern Marion counties (The Villages). Many of these are probably escapees or deliberately released birds. Egyptian geese are still generally associated with urban areas, e.g. parks, golf courses, subdivision lakes. They may be expanding and we have received recent verified reports from conservation lands and more rural areas, e.g. Everglades National Park, Water Conservation Area 2 west of Loxahatchee NWR, Lake Okeechobee, and the Choctawhatchee River in northern Holmes County. Laurence L. Connor is collecting exotic species information for the state. Consequently, please report these species to our database, and selectively to Mr. Conner, when seen during their breeding season. They are not migrants, but some are colonial and forage more widely than our territorial native species.

Larry Connor, Exotic Species Coordination Section

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#### COLONIAL WADERS

A basic result of colonial breeding is the necessity to forage extensive distances from the colony. Flying and foraging herons and such are coded "O" for foraging visitors to the block. Finding colonies is a necessity. Once a colony is found, species entering a colony are coded "V" until a nest or flightless fledgling is located. Repeated entry or large numbers can be assumed to be breeders "ON". When approach to a suspected heronry is not possible because of conservation, terrain or permission problems, a species entering the area can be coded V if repeated traffic is seen. Herons entering a night-time roost, as opposed to a breeding colony, should be coded as "O".

Least Bitterns and Green Herons are not colonial and can be coded as SH whenever seen during their Safe Dates.

Anhinga, Night-Herons, and Limpkins are intermediate, and can sometimes be entered as SH when feeding near suitable nest sites, but not when flying high or when not in suitable nesting habitat (isolated woods). Sandhill Cranes tend to stay close to their breeding site. Always report the "O" coded colonial breeders, because a cluster of "Os" suggest the presence of an undetected colony.

#### VULTURES.

Black and particularly Turkey Vultures forage over so vast an area that seeing a foraging bird cannot lead to the conclusion that they are breeding nearby. The five youngest cohorts are nonbreeders. So the default code for a soaring vulture or one feeding on the ground or roosting near a food source is "O" indicating a not-necessarily-breeding visitor to the Block. In order to get any distribution information we will accept as "SH" vultures first rising from a suitable nest location (not a food source) in the morning, or finding an overnight roost during April – July since they tend to roost near their nest location. Nest site sitting – a pair sitting low and close together near a really good potential nest site during March and April -- may be entered as "N". Following/diving is part of courtship. Incubation interchange and bringing food to a nest helps locate a probable nest site. Young stay near the nest and show some down.

Black Vulture. [Notes from BNA, etc.] Age at first breeding is 6 years. Foraging range about 60 sq mi = 6 Atlas Blocks = radius of about 4.3 miles. Too large for a Block but small compared with a county (Pasco Co = 868 sq miles). Nest densities in TX and PA in favored suburban locations was about 1 per 13 sq mi = 1 per Atlas Block.

**Courtship Displays.** Several authors have described apparent Courtship Flights: One bird, presumed to be male, chases presumed female through the air and periodically dives at her ([Bent 1937](#), [Stolen 1996a](#)). These chases last several minutes, but at least some may represent cases of parents driving away previous year's young from vicinity of nest ([Stewart 1983a](#), [Jackson 1988](#)).

Roosts. Locally breeding adults occur most frequently at roosts near their nest sites and win significantly more fights at such roosts than at roosts farther away ([Rabenold 1987b](#)). Thus, locally breeding adults can partially control access to roosts by nonkin individuals.

Nest Site Characteristics. Uses wide variety of nest sites, but nests typically in dark recesses or under cover of some sort, including hollow logs, stumps and tree trunks, brush piles, thickets, abandoned buildings, and sites beside or under trees and logs are all used. Of 525 nest sites summarized by Jackson (1983), 47.4% were in thickets, 15.4% in hollow trees, and 1.7% in buildings. There was a significant preference for nest sites in roadless, forested areas with no buildings. Near heron and pelican breeding sites.

Incubation changeovers occurred in mid-morning. Incubation probably about 40 days (Jackson). Brooding decreasingly for about 24 days.

First flight appears to occur at 75–80 d (Zukowsky 1956 in [Jackson 1988](#), [Stewart 1974](#), [Jackson 1988](#)). After they can fly, young frequently remain in vicinity of nest site for  $\geq 10$  d before leaving with parents ([Stewart 1983a](#)).

Phenology. In n.-central Texas, first Courtship Flights observed mid-Jan–mid-Feb (see Behavior: sexual behavior, above); complete clutches laid mid-Feb–early Apr (earliest date 10 Feb), hatching mid-Mar–early May, and fledglings observed early Jun–early Aug (see [Fig. 3](#); F. R. Gehlbach pers. comm.). Earliest egg dates along N Gulf in early Feb., in S Florida in Mid-Jan. Up to 2 replacement clutches at approximately monthly intervals extends egg dates into June.

Nest site **Selection Process**. Before nesting begins, a pair of Black Vultures may spend long periods perching conspicuously near a prospective nest site ([Stewart 1983a](#), Jackson [1983](#), [1988](#)); nest-site sitting, which aids researchers in finding nests (Jackson).

Turkey Vulture. [Notes from BNA]

Age at first breeding. Unknown. Marked birds first observed in U-dive (courtship) at 3 years. Apparently high proportion of summer population, at least in some areas, does not breed (MJM).

Nesting pair often seen flying over or near its nest, but so are other individuals ([Work and Wool 1942](#), Davis [1979](#), [1983b](#)), and although nests usually not located near communal roosts, sometimes occur within 50 m ([Lynch 1980](#), pers. comm., MJM). Davis ([1979](#)), however, observed “solo flights” over nest area, limited foraging ranges of pairs (a few minutes flying time from nest). Nest spacing varies from one per valley in PA, 0.3 to 1.0 Km in s PA, and closer spacing also reported.

Nest Site. Most important requirement of nest site appears to be isolation from human disturbance.

In the east the most common sites were thickets (28%), outcrops (21%), hollow stumps (13%), hollow logs (11%), and hollow trees (10%; [Jackson 1983](#)).

The following information is from Coles ([1938](#)) in Ohio, Davis ([1979](#), [1983b](#)) in Texas and MJM in Wisconsin. Male and female often sit together at nest site for several days to several weeks before laying.

Courtship. Follow Flight performed by known mated pairs near nests, and during prerost flight by mated pairs and by birds of unknown relationship: 1 bird flies 20–50 m (range 2–200) behind and often above the other; when following closely, the trailing bird may mimic the leader’s twists and turns. Most Follow Flights (63%) are of short duration ( $\leq 1$  min,  $n = 67$ ). Sometimes repeated for up to 3 h. Flapping more prevalent than during normal flight. In one Texas pair, female was in lead 82% of flights ( $n = 28$ ). Pairs sometime leave communal roost together after sunset and perform Follow Flight until after dark. Follow Flight performed much more often in spring than in summer or fall. Following bird sometimes dives on lead bird (U-dive).

In s. U.S. ([Jackson 1983](#)), eggs are laid as early as early Feb, usually mid-Mar–early Apr.

Incubation: 38–40 d (2 nests in Ohio caves; [Coles 1944](#)).

In Texas, Davis ([1983b](#)) saw adults change places at nests on 4 occasions, all during period from 07:54 to 09:30 h; changeover occurs probably once daily in most cases.

Nestlings are brooded continuously by parents for 5 d, male and female taking turns; brooding then decreases until nestlings are 2 wk old ([Davis 1983a](#)).

After brooding, frequency of feeding varies, but generally 2–3 times daily ([Davis 1983b](#));

At fledging, young have downy cap; down sometimes visible in collar. Usually spend 1–3 wk perching and roosting at nest site, being fed by parents, and gradually exploring area by flight, possibly visiting carcasses. Typically leave nest area by 12 wk of age, joining communal roosts or perches if nearby ([Abbors 1979](#), [Davis 1983b](#), [Coleman 1985](#)).

## KITES.

Swallow-tailed Kite (STKI). These Kites are social and often nest in loose colonies. Particularly before and after breeding they form large feeding flocks, especially over unmowed field, where thermals sweep large numbers of insects high into sky (aerial plankton). Observer discretion must be used when reporting high-flying STKIs as breeders within a block since they may be foraging miles away from their nests, particularly before the young hatch – beginning mainly in May. Once young are being fed, adults tend to stay closer and forage lower. Post season, in August, they form large feeding flocks where thermals.

So if STKIs are observed soaring high in thermals please report as "O". Preferred Dates are 20 Apr – 20 June for the SH code (vs. Safe Dates of 1 April – 31 July: 4 months long).

Mississippi Kite. Similar to STKIs, this species sometimes forms feeding flocks, often mixing with S-t Kites. The 3-month Safe Dates (5/1-7/31 should be shortened slightly: Preferred Dates of 5/1-7/15.

## SANDHILL CRANE.

Wintering cranes can be separated from the resident subspecies by its extensive flocking behavior. Take care not to record winter visitors as breeding birds before mid-March.

## CRESTED CARACARA.

Adults stay on a home range and mostly use a home range of less than half the area of the Blocks in the Atlas Project. When possible, check for brownish back and buffy underparts of a first year bird. These birds wander more than adults and should be coded "O", a disappointment when you have a rarity. Second and third-year birds don't breed, look like adults and wander more. Code them SH, but expect the text to label those outside the established breeding distribution as probable non-breeders. Spend a little extra time and try to upgrade them.

## BARN OWL.

Some Barn Owls travel south along the eastern seaboard and winter in Florida. So we propose a preferred date range to 4/1 to 8/31 rather than all year. However, since we accepted winter records for this species on the 1st Atlas, please mark winter reports as "O" and be sure to turn them in if you do not find better breeding evidence.

## CHIMNEY SWIFT.

Flying Swifts should be counted as on territory. They usually forage within 0.5 km of their nests, and young usually stick to their neighborhood through July. No need to code them as "O". Trio flying can be counted as "C", interpretation unknown but part of their early breeding rituals. The best way to confirm Swift breeding is to hear the young begging inside a chimney – but you have to ask a resident to get that information.

**RUBY-THROATED HUMMINGBIRD.** Southbound hummers start arriving at feeders in the SE by July 1, so Preferred Dates are 5/15 to 6/30. Ask feeder owners for approximate dates, so you can back date into June if they say hummers have been coming all summer.

## PURPLE MARTIN.

Study with radio-tagged young birds show that they rarely remain more than 2 weeks at their nest sites. For example, 36 Martins were roosting and feeding in a cut-over turkey oak stand on June 1 in Calhoun County. Therefore SH code is not acceptable for birds not present at a breeding site, but birds at a nest site can be reported as SH even if not going into nest boxes. Best technique is to find active nest boxes by cruising or by interviews of residents. Preferred dates are 3/1 – 5/31 unless in the vicinity of a nest site.

## BARN SWALLOW.

They usually nest under bridges in Florida. Since it is now against the law to stop or get out of your vehicle on Florida limited access highways except for emergency (\$500, fine!), please try to find another site in the Block. We will accept "SH" for Barn Swallow if seen along an Interstate near an underpass rather than have you get out of your car where it is against the law. If you are missing BARS in your block and think you may have an Interstate site, but cannot check it, please email Rick West with BARS in the title. Preferred Dates are 5/1-6/30, because young are widely dispersed and flocking in July. Note this quote from BBA I: "Many of the "possible" and "probable" breeding records on the Atlas map undoubtedly refer to late spring or early fall migrants and should not be considered to represent breeding birds."

## LOUISIANA WATERTHRUSH.

Migrants begin appearing sparingly in last week in June. Preferred Dates 5/1 to 6/30. If not in song after June 25, should be "O", except well within its limited Florida breeding range.