University of Florida Wildlife Inventory and Monitoring Program: One Year Survey Results and Data Summary

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Background

Facilities Planning & Construction (FP&C), as part of UF's Master Plan, has backed the creation of a program aimed at monitoring wildlife populations in several selected conservation areas on the UF campus. This program was established during fall 2004, and was conducted through August 20, 2005. This report details the results of the monitoring of birds, herps, and mammals in those selected conservation areas, and presents a summary of collected data.

Selected areas included in the program are: Harmonic woods, Fraternity Wetlands, Graham woods, Health Center Park, McCarty Woods, Lake Alice Conservation Area, Lake Alice South, Biven's Rim Forest, Biven's Forest East, and Surge Wetlands. The project started on 23 August 2004 and is scheduled to end on 20 August 2005.

Final Report on Wildlife Monitoring Design and Protocols

The main focus of the sampling design was to measure species richness within the conservation areas, but relative abundance information was collected for as many taxa as possible. After approximately 9 months of sampling, meaningful relative abundance information is available for both birds and herps. Mammals were only able to be sampled for species detection.

In order to assure that sampling effort be applied to each taxa in each area as equally as possible, I placed proportionately more sample points in larger areas. As indicated in the two previous reports, I placed sampling points within an edge-interior sampling regime, with edge for all taxa designated as the first forty meters from the boundary to the inside of the area. All sample locations have been made in ArcView GIS 3.2. Appendix 1 gives abbreviations used in tables for each conservation area name. Table 1 gives the number of sampling points for all taxa in each conservation area. Table 2 gives the number of surveys made per taxa per sampling point per season of sampling effort(Fall 2004, and Winter, Spring, and Summer 2005).

Birds

In the fall of 2004, I initially established 24 bird points throughout all 10 conservation areas. During the remainder of the fall (11/2004), and the winter (12/2004 through 3/2005), the points were regularly sampled. In order to increase my ability to sample for spring migrants, between 3/2005 and 4/2005 I increased the number of points sampled within the conservation areas, resulting in a total of 46 points. The majority of the additional points were considered a separate group that I deemed as “migrant”, while the original group of points was deemed “annual”. The addition of the “migrant” group was made possible by sampling on different days than “annual” points, allowing me to place “migrant” points much closer to “annual” points to meet area restrictions. Area restrictions between points within the “migrant” group were the same as between points within the “annual” group. The “migrant” group did not include any locations in Lake Alice Conservation Area or Surge wetlands because my sampling schedule already includes the approximate maximum number for those areas. Also, because of a horse disease in the adjacent pastures, I could only include 1 point in Lake Alice South within the “migrant group”. Due to size requirements, an edge versus interior comparison can be made in 7 of the 10 areas. Avian sampling took precedence during the entire month of April and first week of May to capture the spring migration. During this period, all points were sampled once a week, every week.

After this period, I reverted back to the original bird sampling schedule, in which birds were sampled every other week, and only at points in the “annual group”. I also further modified this schedule for the summer by only sampling bird points once during sampling weeks due to the lower diversity and lower abundances of avian species during the summer months, and a greater emphasis on herp and mammal sampling. During the Fall of 2005, I will resume a bird sampling schedule similar to the spring migration period, including both “annual” and “migrant” groups in order to capture the fall migration. Out of courtesy to the Facilities Construction and Planning department, the department will be updated on species detected within conservation areas during this period, and it will receive a report updating detected species abundances. See

figures 1 & 2 for the locations of the annual and migrant group point counts, respectively. See table 2 for GPS locations of all sample points.

Herps

Herpetofaunal trapping arrays have been used to sample herps within the conservation areas. Positions for 18 trapping arrays were established within a GIS, and arrays were installed at or near those positions by myself and a few others between November 2004 and early May 2005. Initially, herp arrays were planned to be sampled for 1 week out of a sampling month for four successive nights, with traps being opened on for four nights, checked every day, and then closed after sampling after the fourth night of that week. After a preliminary sampling session in December, however, sampling was suspended due to cold weather until a session in March, which was again met with limited success. Sampling was again halted until May in order to capture the spring avian migration. Herp sampling was then resumed in May and continued through August. Because of the lack of activity during the winter and spring, and the potential of more herp activity during summer, I decided to operate the herpetofaunal arrays for two weeks per month over summer instead of the initially planned one week per month. Herpetofaunal sampling was often combined with avian sampling during a given sampling week to increase sampling efficiency.

There have been some difficulties in array installation and maintenance, especially in low-lying and/or wetland areas. In general, pitfall trap buckets have a tendency to fill with water after rain-fall. Though one solution is to drill holes in the bucket bottom for drainage, in wetland or low-lying areas, the high water-table may push water up through the holes. This was generally the case after it rained recently and/or frequently. In buckets with holes in this situation, I was forced to either close the buckets until water levels receded, or floating material was placed inside buckets to prevent drowning. Buckets could also be placed without holes in the bottom, and then could be simply drained of collected water on a daily basis with a scoop to prevent drowning. However, in this situation, water pressure from below would often push buckets out of the ground. A solution to this was to use iron rebar stakes to hold the buckets in the ground against the water pressure. However, this also failed to prevent to buckets from pushing out of the ground when soil was soft, or when very heavy or very frequent rain intensified ground water pressure. In general, re-installation of buckets was a weekly occurrence in at least a few areas. Also, the wood stakes used to erect fences tended to rot extremely fast during the hot, wet summer months. Stakes frequently broke and had to be replaced with additional wood stakes, or held in place by materials found near the site, i.e. sticks and branches.

See figure 3 for location of Arrays. See Table 6 for GPS positions of all existent and scheduled arrays.

I have also performed one time-constrained visual assessment of herp diversity in McCarty Woods(8/10/05), in which I searched for one hour for herpetofaunal species. I have not been able to conduct night-time surveys for frog diversity due to time constraints, but I may perform

such surveys before the onset of cooler, dryer weather. Out of courtesy to the Facilities Construction and Planning department, the department will be updated on species detected within conservation areas during these surveys, should they occur.

Mammals

Small Mammals: Beginning in 11/2004, I established trapping transects in 8 of the 10 areas to sample for small-mammal diversity, with one transect in each area. McCarty woods and Biven's Rim Forest were not included in effort. Trapping transects were originally scheduled to be run for 5 successive nights, four times a year. During the fall and winter, I ran three trapping sessions (11/30/2004-12/03/2004, 1/25/2005-1/29/2005, 3/22/2005-3/26/2005), but I had had very limited success due to direct interference with traps by raccoons. Overall, raccoon interference led to very low capture rates, stolen traps, and an otherwise frustrating experience. My attempts to reduce interference during these times by covering traps with debris, and wearing protective gloves when baiting, failed. Because of these difficulties, and the small amount of data I had collected, I decided to change my approach to sampling this taxa over the summer months by using trapping grids instead of transects.

Rectangular trapping grids were established in each area except McCarty woods between June and August 2005. When possible, grids were established by incorporating the original trapping transect and simply extending two additional transects of equal length adjacent to it, each twenty meters apart. When previous transects could not be used for the basis of grids because of area constraints, or in order to avoid wetlands, new starting points were selected within the GIS environment. This resulted in 8 grids that contained 3 times the number of locations of original transects. In one area, Biven's Rim Forest, only one transect was able to be added because the shape and size of the area was not conducive to the placement of a grid.

Unlike the original transects, which were intended to begin at an edge and end within an interior location to assess edge affects of rodent diversity and abundances, the trapping grids were simply intended to assess diversity in general. Therefore transects within grids were only required to start 20m from an edge for consistency, and only had to end with conservation area boundaries. Also, grids could not be placed in inundated or partially inundated wetland areas for safety.

Grids were sampled once, in two groups. The first group included Harmonic Woods, Fraternity Wetlands, Graham Woods, Health Center Park, and Lake Alice Conservation Area. The second group included Lake Alice South, Biven's Rim Forest, Biven's Forest East, and Surge Wetlands. Due to time constraints, each group was only sampled for, four-night period each (7/12/2005-7/16/2005, and 8/10/2005-8/14/2005) .

See figure 4 for location of transects and starting points. See table 8 for GPS positions of all transect start points.

Meso-mammals: Formal sampling for meso-mammals was attempted by way of scent-track traps distributed randomly thorough the areas within the same edge-to-interior scheme that was used for the other two taxa. A total of 24 sampling points were established within a GIS environment within all 10 areas, and a total 22 sampling points were installed by me within those areas. 2 locations within Lake Alice South proved to be inaccessible, and it became impractical to install additional points.

Meso-mammal track stations consisted of a circle of sand (area=$0.5m^2$), in the center of which was a stake with a container of scent attached to it. I attempted to use both human urine and sardines as scent baits. Originally, meso-mammal stations were to be sampled for four successive nights, one week per month, starting in May 2005. Stations would be monitored for mammal tracks each day, than raked smooth for the next night, and unidentifiable tracks could be photographed and/or duplicated with plaster molds to be identified at a later time. However, due to weather, substrate difficulties, and time issues, very little data was collected in this manner.

When I initially settled upon the summer to try meso-mammal traps due to increased mammal activity, I failed to take into account the increased and often daily rainfall that accompanies the season. Unfortunately, rainfall affectively "dis-arms" a foot-print trap, erasing most to all signs of activity. During the two sessions that I attempted this technique, frequent and heavy rainfall occurred throughout the weeks. Attempts to work around the generally predictable nature of summer weather in Florida, that is, afternoon rain-showers, were foiled by unpredictable weather activity, namely morning and night rain. In addition to rainfall, the substrate I used, sand, often did not provide a recognizable print; usually just an un-interpretable blob. Attempts to use hydrated lime as a substrate enhancer failed due to high humidity. Lastly, in trying out new substrates, including lime and simply adding more sand, as well as running the rest of the sampling program, I ran out of time to actually sample meso-mammal diversity in this manner. However, despite the failure to gather data effectively in this technique, I feel that through incidental observations and/or captures, and because the expected diversity of meso-mammals was very low to begin with, I have been able to garner a good approximation of the meso-mammal diversity present in the conservation areas.

Results

Birds

As of August, I have detected with certainty, 94 bird species within, flying-over, or within close proximity of the 10 areas that I have been sampling. The conservation area with the greatest number of species detected is Biven's Forest East (BFE) with 65 positively detected species (69% of total avifaunal richness detected), and the area with least number of species detected is McCarty Woods (MW) at 26 positively detected species (27% of the total avifaunal richness detected). A more complete picture of the avian community will be drawn from the upcoming Fall migration, which was largely missed during Fall 2004. See figure 3 for a visual comparison of the avian species richness detected per conservation area. See table 3 for a list of species detected and their associated four-letter codes. See table 4 for lists of species detected within,

flying-over, or shortly outside of each conservation area. Birds were sampled within an edge versus interior frame-work. Because edge points were located 20m from area edges, and abundances were recorded within a distance of 40m from the point location, some birds counted outside the area boundaries are included in the reported abundances. See table 5 for the maximum abundances of species detected during one survey within 40 m distance of sampling locations over all sampled dates.

Herps

The summer 2005 sampling season for herps was successful, with a total of 767 captures of 20 species, and incidental observations or array-associated observations of an additional 15 species, for a total of 35 species detected overall during a period of 23 trap nights. Some species, especially tree frogs in PVP, maybe repeat captures, so the total number of captures is not necessarily a good indicator of the total number of animals present. When tree frog captures via PVP pipe refugia are excluded, a total of 558 captures have been made via array traps. In addition there have been 34 observations of species on or near arrays, and multiple observations of species unassociated with arrays. I have detected the most species in Lake Alice Conservation Area, with a total of 23 species. I have detected the least species in Graham Woods, with a total of 2 species. The number of species for Graham Woods maybe misleading, however, because I had substantial difficulties in maintaining herp array in that area. The Cuban Brown anole is the most commonly detected species, having been informally or formally detected in all areas. See Table 8 for species and abundances detected thus far in each conservation area.

Mammals

Small mammals

I had moderate success in detecting the diversity of the small-mammal community after I switched trapping methodologies. With the grid methodology, I detected both previously detected species (*Rattus rattus* and *Peromyscus gossypinus*), and a new species, *Rattus norvegicus*, in three areas (HW, HCP, GW). I also detected cotton mice in two new areas (LAM, BRF). Through informal means, I also detected Oldfield mouse (*Peromyscus polionotus*) in two areas, and Eastern Gray Squirrel (*Sciurius carolinenisis*) in all areas. In addition, cotton rat (*Sigmidon hispidus)* was noted in a herp array pitfall at Lake Alice Conservation Area. The total number of small mammal species detected was 6, with only 3 of those detected by formal means. The area with the highest number of species was Harmonic Woods with 5, and area with the lowest is Lake Alice South, with 1.

In general, the raccoon interference experienced during the grid methodology trapping session was far less than the transect methodology, and even virtually non-existant in some areas, which may suggest that indeed, raccoons may have been satiated by the number of traps available. However, this may also have been due to the increased food availability for raccoons during the summer that was not present during the winter and spring. Overall, though, I would suggest that the grid methodology is more effective than the transect methodology used previously, even though several grid “lines’ were previous single transects. It may be that in urban areas, where

densities of native rodents may be low, it might be more relevant to cover larger areas, than to try to exploit territoriality behavior that might be altered non-existent in the system.

Meso-mammals

Only two formal meso-mammal trapping sessions were attempted, and both only resulted in armadillo sign and raccoon tracks. I made far more incidental observations of meso-mammals than I did by way of footprint traps. *Procyon lotor* (accoon) are the most commonly detected species, with tracks, visual observations, or raccoon-related small mammal trap activity in every area. *Didelphis virgianus* (Virginia opossum) would be expected in all areas as well, though few signs have been present. It should be noted, however, that caught baby opossums in small mammal traps in HCP, as well as in a herp pitfall trap at LAM. It would seem that most areas also have *Dasypus novemcincus* (9-banded armadillo), with armadillo holes and live observations made throughout many conservation areas. I have detected the most species of meso-mammalss in Biven's Forest East, with four species. A few areas only have *P. lotor* as being the only meso-mammal officially detected. However, I would be very surprised to not find either *D. virginianus* or *D. novemcinctus* with a more thorough search. I also expect that feral cats may be more prominent than my detections of them would indicate. See table 10 for species and abundances detected thus far in each conservation area for both small and meso-mammals.

Volunteer Effort

Only a small group of students from the UF Student Chapter of The Wildlife Society that have accompanied me while conducting point counts, herp, and small mammal trapping during the course of the year. I believe this was due to both extremely busy schedules, prohibitively time consuming and irrelevant prerequisites to volunteering required by the UF IACUC, and general apathy on the part of most undergraduates. However, those who did help often helped more than once and were generally in good spirits about it. I had planned to pass the project along to the UF Student Chapter of TWS, so that perhaps small amounts of data may be collected in the years elapsing between times this study was to be replicated. Depending upon student interest, this may or may not happen. I will continue my involvement in this organization, and strive to see that at least in part, data can continue to be collected.

Management Recommendations

No areas sampled contained threatened or endangered species, with the exception of Biven's Forest East, which occasionally was used by Bald Eagles to perch in. This species also been seen flying near or over other areas as well. However, the University of Florida Conservation Areas do play host to a variety of other wildlife species, including a large number of migratory and winter-resident bird species with a smaller subset of annual resident avian species, a moderate diversity of herpetofauna, and a few small mammal and meso-mammal species. Therefore, Conservation Areas should be managed in order to maintain and increase that diversity of over time, in addition to their maintaining their roles as passive recreation areas. The following

management recommendations were already suggested in a previous report, but have been updated with additional information gained since then:

- **Invasive/Exotic Plant Control**: For almost all of the sites we recommend invasive/exotic plant control, either by manual and/or chemical means. Particularly, we would target Air Potato (*Dioscorea bulbefera*), Coral Ardesia (*Ardesia crenata*), and White-flowered Wandering Jew (*Tradescantia flumenisis*) for this effort. They are all common and numerous in almost all of the 10 areas, and the latter two are significant parts of the under-story of many of the upland areas. Of the three, Coral Ardesia interacts with wildlife the most. Dan has observed birds eating Ardesia berries and large amounts of berries are present in raccoon scat. Therefore, both of these taxa help to spread Coral Ardesia.

- **Maintaining Trails**: The recent hurricanes have caused many large trees to fall in several of the conservation areas. The affect of this has been generally positive for wildlife because of the increased structure on the ground. However, to maintain the passive recreation goal for some of the areas, we recommend clearing hurricane-felled trees off of established trails, as well as actively maintaining established trails. This should discourage people from making new trails and further disturbing wildlife and wildlife habitat. In areas such as Health Center Park, which is fragmented by criss-crossing trails, we recommend actively maintaining the most used trails and discouraging use on the others. Posted signs would greatly help this effort.

- **Creating a Heterogeneous Environment**: Though increased vegetative structure generally makes for better wildlife habitat (for some species), areas with both open understory and dense vegetation make the conservation areas more heterogeneous. A heterogeneous environment will support a more diverse number of wildlife species. Several of the areas are (or will become) choked over time with large amounts of vegetation, particularly vines. With a lengthy drought, these regions could turn into potential fire hazards. To reduce this threat, as well as to maintain the heterogeneity of the conservation areas, we recommend periodic, selective thinning out of vines and woody-shrub vegetation in some dense upland areas (either with fire or by mechanical means).

- **Water Quality Monitoring**: Though its already being done in some areas, we recommend increased water-quality monitoring for areas containing wetlands, namely Graham Woods, Lake Alice South, Surge Wetlands, and Biven's Forest East. These areas contain many small pools in which Dan has noticed tadpoles, and there are sizeable numbers of frogs present. These areas also contain the highest overall diversity of avian and herpetofaunal species, and the continuance of the presence of habitable wetlands in these areas may be important in maintaining this diversity. All of these areas subject to run-off from road and/or agricultural contaminants. In addition, Dan has noted that on one occasion, a nearby swimming pool was drained into Graham Woods. Perhaps

chemical testing sites and silt-traps in some creek areas that drain into these conservation areas would be appropriate.

- **Trash**: Most of the areas are littered with trash, though some are worse than others. If only for aesthetic reasons, we would recommend some concerted effort to clean up the trash in several of the areas, the placing of trashcans, or the posting of signs prohibiting trash dumping. Graham Woods and Biven's Forest East are particularly littered with human garbage of various sorts. Graham woods is very near several sports stadiums and dorm areas, so perhaps placing more trash cans along its edge will prevent so much trash from being dumped into it. In Biven's Forest East, a large amount of the trash has washed in from Biven's Arm Lake when it has flooded. Also, the large drainage canal that leads from 13th St. to the eastern border of Biven's Forest East brings a lot of trash from 13th st. into the area, distributing garbage throughout system of streams in the area. Perhaps the posting signs or placing trashcans can prevent so much trash from ending up in that conservation area.

- **General Maintenance of Nearby Facilities & Land**: All of the conservation areas are located near human habitation. We suggest informational signs and/or maintenance restrictions for any conservation areas next to land maintained or frequented by people. In particular, limit pesticides or on turf next to conservation areas. Also, bright lights should be avoided near conservation areas (i.e., it can disturb wildlife). Signage should inform people about the nearby conservation area (e.g., species found, type of habitat, etc.) and impacts people could have on it (e.g., going off or making new trails; littering; releasing exotic pets; loud human disturbances, etc.). For any conservation areas that are right next to turf or any type of impervious surface, we suggest creating a vegetative buffer (e.g., bushes or tall grass) that will prevent people from entering these areas and also help filter out pollutants in runoff.

- **Acquisition of adjacent land:** Biven's Rim Forest, Biven's Forest East, and Health Center Park conservation areas are adjacent to wooded habitat that is continuous with wooded habitat contained in the areas. To make a buffer more consistent with the boundaries of these conservation areas, we recommend that the boundaries be expanded to include such habitat.

Site Specific Recommendations

Harmonic Woods: Removal of Ardesia, maintaining of established trails.
Fraternity Wetlands: Removal of White-flower Wandering Jew along stream.
Graham Woods: Removal of Air Potato, White-flower Wandering Jew. Extensive trash cleanup.
Health Center Park: Removal of multiple exotic plants. Reduction of trails. Because this is very open habitat in some places, plant some buffer shrubs around the more open edges. Expansion of boundaries to include adjacent portions of continuous wooded habitat, particularly the wooded habitats bordering the northwest and southwest boundaries of the property.
McCarty Woods: Exotic plant removal, maintenance of trails.
Lake Alice Conservation Area: Trash removal
Lake Alice South: Trash removal. Water-quality monitoring.

Surge Wetlands: Trash removal. Water-quality monitoring.
Biven's Rim Forest: Expansion of boundaries to include portions of continuous wooded habitat adjacent to its borders, particularly the wooded habitat adjacent to the south-western portion that borders Biven's Arm lake.
Biven's Forest East: Exotic plant removal. Water-quality monitoring. Extensive trash cleanup. Would recommend either the placement of trash cans, or the posting of signs near the large drainage canal leading from 13th street to the eastern border that prohibit the dumping of trash dumping near canal or on UF property. Expansion of boundaries to include portions of continuous wooded habitat adjacent to its borders, particular the wooded habitat in the southwestern portion between the Veterinary school horse pastures and Biven's Arm Lake.

NOTES ON SAMPLING WITHIN UF CONSERVATION AREAS

Sampling conditions within the UF conservation areas can be of varied complication and success depending upon the topography, the condition of the vegetation, and the presence or absence of wetlands. Most sites with primarily upland habitat, such as HW, FW, HCP, MW, BRF, SW, and most of sampled LAM are relatively easily sampled for all taxa. Main concerns in these areas are the increasingly thick under- and mid-story vegetation, large fallen trees, occasional flooding during heavy rain, and open-ness in places. These issues become most relevant with the installation of herp trapping arrays, small mammal transects, and meso-mammal traps. Generally, suitable sites within these upland areas for the theses sampling methods can be found relatively easily, however, thick vegetation and fallen trees can pose a substantial challenge to site location and installation of sample methods, depending upon the circumstance. Occasional flooding may cause herp buckets to come up out of the ground, and hasten the deterioration of wooden fence stakes. Openness of habitat can become a problem for both herp array installation and small mammal trapping grid placement if exposure to the public is high. I have not personally experienced any vandalism or larceny by the public concerning trapping arrays, but I have also intentionally positioned herp and mammal traps in vegetation so as not to be noticed by the general public. However, this concern can limit the number of locations available for the installation of traps, particularly in HW and HCP which have high openness in places and higher public exposure than other areas.

Most sampling difficulties that I have experienced have been faced in areas that are constituted by a sizeable percentage of bottom-land hardwood-type forest or swamp wetlands, namely in GW, LAS, parts of LAM, and BFE. GW is more or less bowl-shaped, and is essentially a drainage area for much of the surrounding areas. So, there are a number of streams that pour into it from the surrounding development. Because of this, stream levels can fluctuate enough to flood the ground in the parts of the "bottom" of bowl into very mucky, very lose soil. I would definitely recommend re-locating the edge herp array in this area to a place with firmer soil. As it is, the pitfall trap could not be held in the ground, even with rebar stakes, because the ground was just too soft after rain. This area can also be challenging in general because the vegetation is thick, and with the large number of sizeable fallen trees, there are parts that are very difficult to get around in, establish herp arrays in, and run mammal transects through. In terms of

small mammal traps, though, once a transect is established, it is usually easy enough to find dry land to place it on. Lastly, the topography in this area is unusual in that since its bowl shaped, there is some relatively steep terrain towards the northern edge, which effectively make large permanent structures there impractical. Also, because of the drainage streams, there are small ravine-like crevices that can make north-south movement a bit perilous and sampling a bit difficult.

Lake Alice South is an unusual area in that around half of it is horse pasture, so it was difficult to decide how to sample it area-wise. Like GW, it acts like a drainage area for surrounding development and horse pastures, with water levels fluctuating widely with rains. Again, with more rain, the streams tend to flood over a bit into the already soggy land, creating pretty mucky conditions in lower-lying parts, which constitute majority of the wooded area. Consequently, the selection of herp array and mammal trap transect locations can be difficult. Also, installation can be challenging due to the seemingly vast abundance of briars and black-berry bushes, as well as thick vegetation, and fallen trees (which tend to leave small ponds at their bases). Lastly, there are several old barbed-wire topped fences in this area that must be traversed and dealt with in various locations. The entire area is surrounded by fences in various states of repair; some old fences with wholes that can be used for access, and some newer, tall fences that have to be either avoided or jumped over. Consequently, access to this area can be somewhat limited. I have generally accessed it by parking behind a cattle fence east of the Jiffy Lube and just west of the Jimmy Johns on Archer road. After the cattle fence is jumped, I usually get into the area by heading away from the adjacent horse pasture, and towards the forested canopy, where I use a hole in an old, short barbed-wire fence made by a fallen tree. Another way to access this area is to go through a gated fence directed next to the WEC/SFRC vehicle compound which will lead you the aforementioned hole in the fence. If one was to gain a key to this fence, access would probably be more convenient than it is now.

Lake Alice Main is what I call the northern portion of the Lake Alice Conservation Area. The southern portion of that is a large freshwater marsh that I had initially intended upon targeting for sampling, but after several traverses into it, I decided it was inaccessible enough to prohibit sampling it due to time concerns. Lake Alice Main, however, is a relatively large, reasonably-open, upland patch of habitat that is comparatively easy to sample. The two main concerns with LAM are people and flooding in parts. Unlike other areas, LAM receives a good number of visitors and its trails are frequently used by dog-walkers. Therefore, I would recommend that herp arrays again be conscientiously built away from the open view of people for the safety of captured specimens. Also, one of the “interior” herp arrays is in a clear-cut that is dominated by tall, weedy species. I would recommend that if arrays are built there again, plans for the field be investigated so that any herp array to be installed isn’t accidentally destroyed by Bush-hog or a prescribed fire. In addition, because it is so open at this location, I would recommend raised shade boards over both pitfall and funnel traps to prevent desiccation. The second concern, flooding, is really only applicable to the far western portion that is a bit lower and has several streams that run through it. Herp array pitfall traps have had a tendency to pop out of the ground after rain, even with rebar stakes, and I would advise caution when installing traps there. However, I would say that despite the problems with arrays in wetland areas, the far west LAM herp array has produced the only salamanders caught over the entire field season, so I consider the effort worthwhile.

Biven's Forest East is by far the most challenging area to sample in the entire group of sampled areas. It is shaped like a large N-S oriented bowl, with a thinner "pan-handle" that stretches E-W along Biven's Arm Lake. The terrain of the bowl glades from mixed pine-hardwoods forest on the northern, western, and eastern edges, to a hardwood swamp in the northern bowl bottom, to stream-crossed bottom-land hardwood forest in the middle, and back towards hardwood swamp towards the southern end as it approaches the lake. This area poses many challenges because of the varied topography and corresponding vegetation. Though the edges and southern panhandle of this area are mainly upland habitat, the majority of habitat in this area is some form of wetland. Again, this causes problems for herp array installation, meso-mammal trap installation, and small-mammal trapping transect placement. The placement of herp arrays in this area definitely takes some knowledge of current conditions, including vegetation density, which is often high, access to the site, and soil type, which can be extremely mucky. Also, the hurricanes of 2004 caused significant damage to these areas, causing massive tree-fall and effectively creating "walls" of vegetation that must be circumvented or in which paths must be discovered or cut through. In general, the vegetation itself varies with topography, and during spring and summer months, the vegetation growth, especially of wild taro and elderberry plants, can make what was relatively open bottom-land swamp into very thickly vegetated habitat in a matter of weeks. In fact, during the height of summer, commonly used paths in these areas can become overgrown with plants in a matter of days. Lastly, this area, like the previous ones, serves for drainage purposes for the surrounding area, and thus has a number of streams. There is also a large canal built on the central eastern border of the property built expressively for this purpose. I would advise caution during rainstorms in BFE. Water accumulates extremely fast, and small streams only inches deep can become running creeks several feet deep very quickly during rain-storms. Naturally, flooding also is an issue, and care must be taken when planning small mammal trapping locations so that traps are not placed in potentially floodable locations. In fact, because of the variation in water level, especially over the spring and summer, I would recommend that small mammal trapping be done in the southern panhandle area, which is more reliably upland. So, notwithstanding, the challenges of the terrain, which can range from fairly solid ground to extraordinarily mucky ground over a short distance, and the variable vegetation and fallen trees, can make the establishment of sampling points and sampling in general difficult, and travel within BFE very time consuming and slow.

In addition, the shape, size, and position of the conservation area make access an issue. It is situated mainly south of the Veteran hospital and residential areas, and east of horse pastures owned by the school of veterinary medicine. Because it is long and relatively thin, and surrounded by intact fences on all sides access to it is limited to two main locations within the UF campus boundaries. The best access point by road is a grass path between the adjacent horse pastures that ends in a small turn around area directly next to the conservation area boundaries. There are several holes in the barb-wire fences in this location, and it is central to the conservation area in general. An access key has to be acquired from Vet Med in order to use this access point. The other location, which I began to use after the aforementioned pastures were quarantined due to a horse disease, is the Winn-Dixie Hope Lodge. Parking is restricted here, and a parking permit must be obtained. This location, though also at the conservation area boundary is at the northern end of the property, and therefore the entire length of the area must usually be traversed to get to sampling points. Other access points include private property locations on 13th St. which must be investigated further prior to their use. There is also an access point to the

southern panhandle by taking another road in between horse pastures to the conservation area boundary. However, a ladder is recommended to scale the fence safely.

Despite the challenges, because of its heterogeneity, BFE offers habitat for a wide number of wildlife species, and should be sampled as best as possible to capture that diversity.

Lastly, I offer a note for herp sampling. I experienced a number of amphibian deaths in pitfall traps and funnel traps due to desiccation, iso-tonic water conditions, and predation. I would recommend that water always be added to sponges in pitfall and funnel traps. Captured specimens may still not use them, and crawl into a corner to desiccate, but it is worth it for the species that are more apt to use the sponges. I would also recommend that when water is not able to drain, either soil or something large enough to float out of the water be put in the bucket. I experienced a large number of bronze frog juvenile deaths that I believe were due to isotonic water conditions. Soil, especially with minerals in it, or floating debris generally alleviates the problem. Unfortunately, nothing can be done to prevent predation on pit-fall captured specimens. However, one idea may be to place a raised cover over the open bucket. Such a cover, as mentioned before, may be placed over the pitfall trap of sun-exposed arrays to prevent desiccation, as well to prevented further predation events from occurring, at least by mammalian predators. If predation events become frequent, it might be worth it to prevent needless loss of specimens.

Appendices

Table 1: Numbers of sample locations per Area for each sampling technique

Conservation Area	No. of Hectares (reported by FC&P and verified by calculation in ArcView 3.2)	Total no. of avian point count locations	No. of Herp Arrays	Length of Small mammal transects(m)	No. of meso-mammal scent/track stations
Harmonic Woods	3.670	5	2	60	2
Fraternity Wetlands	2.572	4	1	60	2
Graham Woods	3.043	4	2	60	2
Health Center Park	3.519	4	2	80	2
McCarty Woods	1.153	2	0	-	1
Lake Alice Main	48.14	6	4	240	4

Table 1: continued

Lake Alice South	6.606	4	1	80	1
Biven's Rim Forest	3.308	4	1	-	2
Biven's Forest East	16.592	10	4	240	4
Surge Wetlands	4.964	3	1	80	2

Table 2: University of Florida Conservation Area name abbreviations

BFE=Biven's Forest East	HW= Harmonic Woods
BRF=Biven's Rim Forest	LAM=Lake Alice Conservation Area
FW=Fraternity Wetlands	LAS=Lake Alice South
GW=Graham Woods	MW=McCarty Woods
HCP=Health Center Park	SW=Surge Wetlands

Table 3: Total Number of Surveys per sampling point per taxa per season in the University of Florida Conservation Areas

			Number of Surveys Conducted per Season				Total # of Surveys
Taxa	Area	Sample Point ID	Fall (11/04-12/04)	Winter (12/04-4/04)	Spring (4/05-5/05)	Summer (5/05-8/05)	
Birds	HW	1	4	16	5	7	32
	HW	2	4	14	4	6	28
	FW	3	4	16	5	7	32
	FW	4	4	16	5	7	32
	GW	5	4	15	5	7	31
	GW	6	4	15	5	5	29
	HCP	7	4	15	5	7	31
	HCP	8	3	15	5	7	30
	MW	9	4	15	5	7	31
	LAS	10	3	17	5	6	31
	LAS	11	3	17	4	7	31
	LAS	12	2	16	4	7	29
	BRF	14	3	16	4	6	29
	BRF	15	3	16	4	6	29
	BFE	16	3	15	4	7	29
	BFE	17	3	15	4	7	29
	BFE	18	3	14	4	7	28
	BFE	19	3	14	4	7	28

Table 3: Continued

	LAM	20	1	8	4	5	18
	LAM	21		5	4	5	14
	LAM	22		5	4	5	14
	LAM	23	1	8	3	5	17
	SW	24	1	7	4	5	17
	SW	25		6	4	5	15
	HW	28		3	5	7	15
	BFE	31		1	4	7	12
	LAM	33		1	4	4	9
	LAM	34		1	4	4	9
	SW	35		1	3	4	8
	HW	101			4		4
	HW	102			4		4
	FW	103			4		4
	FW	104			4		4
	GW	105			4		4
	GW	106			4		4
	HCP	107			4		4
	HCP	108			4		4
	MW	109			4		4
	LAS	111			3		3
	BRF	113			3		3
	BRF	114			3		3
	BFE	116			3		3
	BFE	117			3		3
	BFE	118			3		3
	BFE	119			3		3
	BFE	200			3		3
Herps	HW	1				24	24
	HW	2				24	24
	FW	3				24	24
	GW	4				24	24
	GW	5				24	24
	LAM	6				24	24
	LAM	7				24	24
	LAM	8				24	24
	SW	9				24	24
	HCP	11				24	24
	HCP	12				24	24
	LAS	13				24	24
	BRF	14				24	24
	BFE	15				23	23
	BFE	16				22	22
	BFE	17				22	22
	BFE	18				23	23
	LAM	19				24	24
	MW	N/A				1	1
Small Mammals	HW	N/A	1	2			3

Table 3: Continued

TRANSECT METHOD		N/A					
	FW		1	2			3
	GW	N/A	1	2			3
	HCP	N/A	1	2			3
	LAS	N/A	1	2			3
	SW	N/A	1	2			3
	BRF	N/A	1	2			3
	BFE	N/A	1	2			3
	LAM	N/A	1	2			3
Small Mammals GRID METHOD	HW					1	1
	FW					1	1
	GW					1	1
	HCP					1	1
	LAS					1	1
	SW					1	1
	BRF					1	1
	BFE					1	1
	LAM					1	1
Meso-Mammals	HW					8	8
	FW					8	8
	GW					8	8
	HCP					8	8
	LAS					8	8
	SW					8	8
	BRF					8	8
	BFE					8	8
	LAM					8	8

Annual Group Avian Point Count Locations

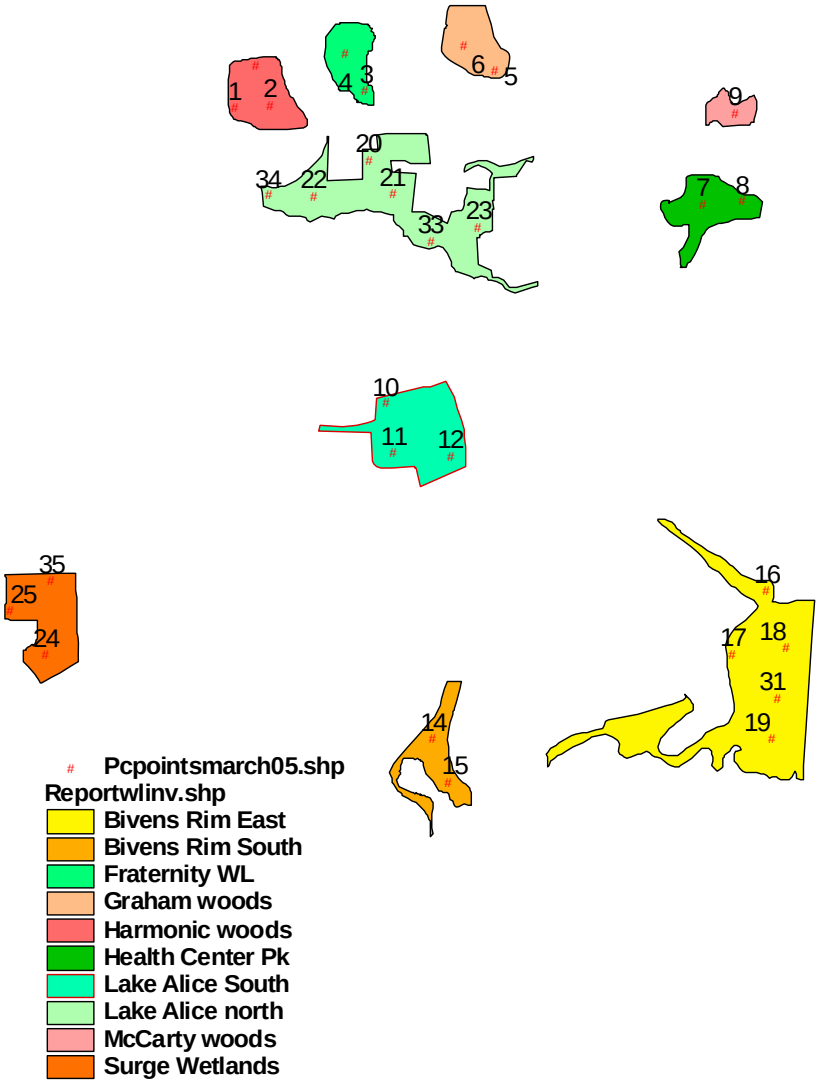

FIGURE 1: Avian point count locations surveyed on an annual basis

Migrant Group Avian Point Count Locations

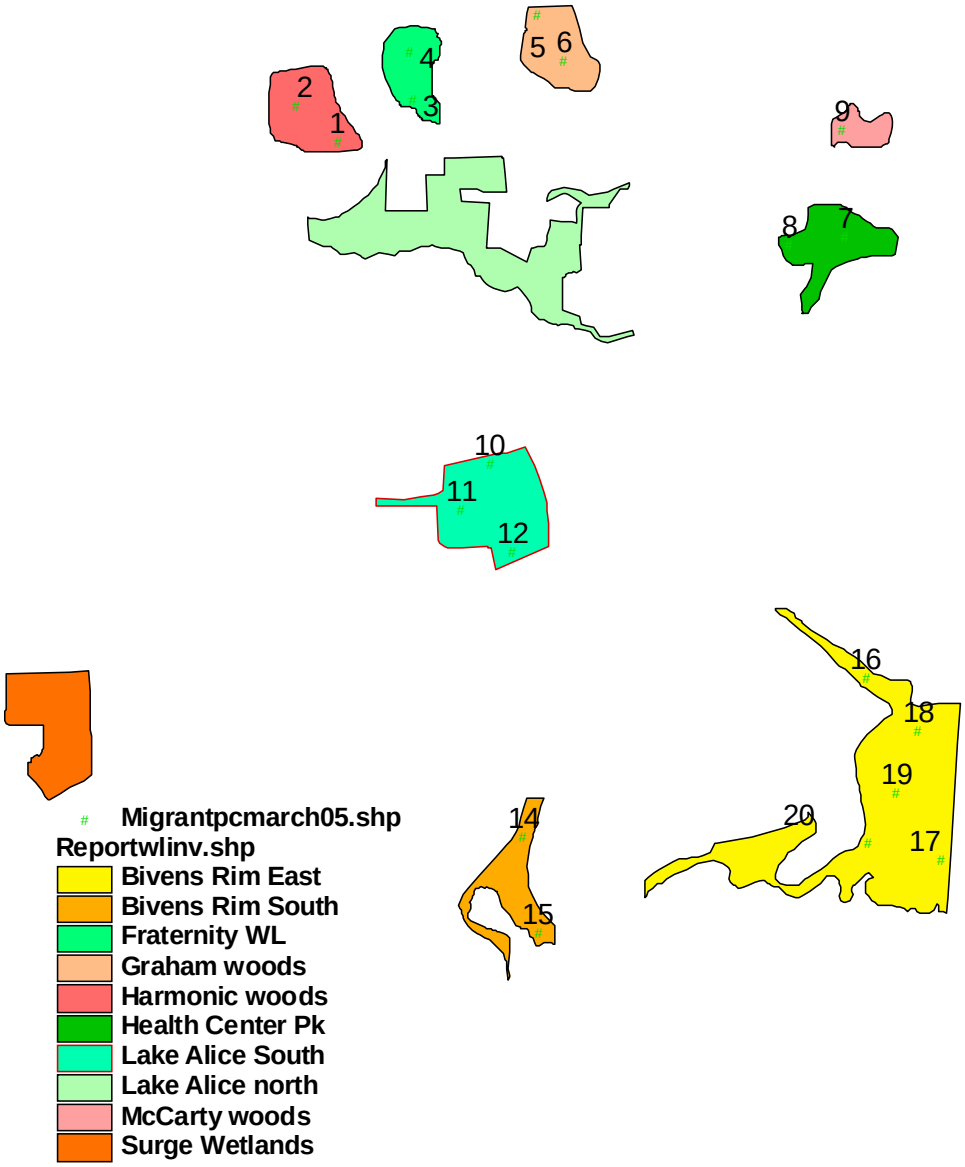

Figure 2: Avian point count locations added to capture migrant diversity

Table 4: GPS locations of Annual Group avian point counts

	Long: 82deg W	Lat: 29deg N	Area
1	21' 34.73"	38' 44.33"	HW
2	21' 30.90"	38' 44.49"	HW
3	21' 20.41"	38' 45.66"	FW
4	21' 22.52"	38' 49.16"	FW
5	21' 6.07"	38" 47.33"	GW
6	21' 9.54"	38' 49.87"	GW
7	20' 41.28"	38' 43.67"	HCP
8	20' 43.60"	38' 34.23"	HCP
9	20' 39.29"	38' 34.49"	MW
10	21' 18.76"	38' 15.93"	LAS
11	21' 14.76"	38' 15.00"	LAS
12	21' 13.05"	38' 11.95"	LAS
14	21' 14.25"	37' 43.88"	BRF
15	21' 12.72	37' 39.66"	BRF
16	20' 37.39"	37' 57.29"	BFE
17	20' 41.21"	37' 51.35"	BFE
18	20' 35.41"	37' 51.90"	BFE
19	20' 37.12"	37' 43.19"	BFE
20	21' 20.16"	38' 39.02"	LAM
21	21' 18.14"	38' 32.43"	LAM
22	21' 19.94"	38' 29.42"	LAM
23	21' 8.26"	38' 32.44"	LAM
24	21' 10.16"	38" 24.20"	SW
25	21' 6.52"	38' 21.39"	SW
28	21' 32.46"	38' 48.33"	HW
31	20' 36.40"	37' 47.08"	BFE
33	21' 13.58"	38' 31.20"	LAM
34	21' 31.32	38' 35.90"	LAM
35	21.55.90"	37' 59.56"	SW

Table 5: GPS locations of Migrant Group avian point counts

	Long: 82deg W	Lat: 29deg N	Area
1*	21' 29.13"	38' 42.82"	HW
2*	21' 32.90"	38' 45.88"	HW
3*	21' 22.01	38' 46.23	FW
4*	21' 22.21	38' 50.16"	FW
5*	21' 10.34	38' 52.97"	GW
6*	21' 7.93"	38' 49.09"	GW
7*	20' 47.28"	38' 33.80"	HCP

Table 5 continued:

8*	20' 42.10"	38' 34.43"	HCP
9*	20' 42.17"	38' 43.10"	MW
11*	21' 13.56"	38' 9.20"	LAS
14*	21' 13.02	37' 46.03	BRF
15*	21' 11.82"	37' 38.19"	BRF
16*	20' 40.87"	37' 58.49"	BFE
17*	20' 47.39"	37' 45.92"	BFE
18*	20' 36.10"	37' 54.12"	BFE
19*	20' 38.24"	37' 49.09"	BFE
20*	20' 40.4"	37' 45.9"	BFE

Table 6: 4-letter avian species abbreviations

Abbreviation	Common Name	Abbreviation	Common Name
AMCR	American Crow	MODO	Mourning Dove
AMGO	American Goldfinch	NOCA	Northern Cardinal
AMRE	American Redstart	NOFL	Northern Flicker
AMRO	American Robin	NOMO	Northern Mockingbird
ANHI	Anhinga	NOPA	Northern Parula
BAEA	Bald Eagle	NOWA	Northern Waterthrush
BAOR	Baltimore Oriole	OCWA	Orange Crowned Warbler
BAWW	Black and White Warbler	OROR	Orchard Oriole
BBWD	Black-Bellied Whistling Duck	OSPY	Oprey
BDOW	Barred Owl	OVEN	Ovenbird
BEKI	Belted Kingfisher	PABU	Painted Bunting
BGGC	Blue-Gray gnatcatcher	PAWA	Palm Warbler
BHCO	Brown-headed cowbird	PIWA	Pine Warbler
BHVI	Blue-headed Vireo	PIWO	Pileated Woodpecker
BLJA	Blue Jay	PROW	Prothonotary Warbler
BLVU	Black Vulture	PRWA	Prairie Warbler
BOBO	Bobolink	PUMA	Purple Martin
BPWA	Blackpoll Warbler	RBGU	Ring-billed Gull
BRTH	Brown Thrasher	RBWO	Red-bellied Woodpecker
BTBW	Black Throated Blue Warbler	RCKI	Ruby-crowned Kinglet
BTGR	Boat-tailed Grackle	REVI	Red-eyed Vireo
CACH	Carolina Chickadee	RHWO	Red-headed Woodpecker
CARW	Carlolina Wren	RODO	Rock Dove
CEWA	Cedar Waxwing	RSHA	Red-Shouldered Hawk
CHSP	Chipping Sparrow	RTHA	Red-Tailed Hawk
CHSW	Chimney Swift	RTHU	Ruby-throated Hummingbird
COGR	Common Grackle	RWBB	Red-winged Blackbird
COHA	Cooper's Hawk	SACR	Sandhill Crane
COYE	Common Yellowthroat	SNEG	Snowy Egret
DCCO	Double-Crested Cormorant	SSHA	Sharp-shinned Hawk
DOWO	Downy Woodpecker	SUTA	Summer Tanager
EABL	Eastern Bluebird	SWWA	Swainson's Warbler
EAPH	Eastern Phoebe	TRSW	Tree Swallow

Table 6: Continued

ETTI	Eastern Tufted Titmouse	TUVU	Turkey Vulture
EUST	European Starling	UNID-duck	Unidentified duck
FICR	Fish Crow	UNID-egret	Unidentified egret
GBHE	Great Blue Heron	UNID-gull	Unidentified gull
GCFL	Great Crested Flycatcher	UNID-sparrow	Unidentified sparrow
GRCA	Gray Catbird	UNID-warbler	Unidentified warbler
GREG	Great Egret	UNID-waterbird	Unidentified wader/waterbird
GRHE	Green Heron	WEVI	White-eyed Vireo
HETH	Hermit Thrush	WEWA	Worm-eating Warbler
HOFI	House Finch	WHIB	White Ibis
HOSP	House Sparrow	WITU	Wild Turkey
HOWR	House Wren	WTSP	White-Throated Sparrow
INBU	Indigo Bunting	YBCH	Yellow-breasted Chat
KILL	Killdeer	YBSA	Yellow-bellied Sapsucker
LBHE	Little Blue Heron	YRWA	Yellow-rumped Warbler
LOSH	Loggerhead Shrike	YTVI	Yellow-throated Vireo
MIKI	Mississipi Kite	YTWA	Yellow-throated Warbler

Table 7: All bird species detected per area between October 2004 and August 2005 in the University of Florida Conservation Areas

Harmonic Woods	Fraternity Wetlands	Graham Woods	Health Center Park
AMCR	AMCR	AMCR	AMCR
AMGO	AMGO	AMGO	AMGO
AMRE	AMRE	AMRE	AMRO
AMRO	AMRO	AMRO	BAWW
BAWW	BAWW	BAOR	BEKI
BGGC	BGGC	BAWW	BGGC
BHCO	BHCO	BGGC	BHCO
BHVI	BHVI	BHVI	BHVI
BLJA	BLJA	BLJA	BLJA
BRTH	BRTH	CACH	BRTH
BTBW	BTBW*	CARW	BTGR
BTGR	CACH	CEWA	CACH
CACH	CARW	CHSW	CARW
CARW	CEWA	COGR	CEWA
CEWA	CHSP	COYE	CHSW
CHSW	CHSW	DCCO	COGR
DCCO	COHA	DOWO	DOWO
DOWO	DOWO	EAPH	EAPH
EAPH	EAPH	ETTI	ETTI
ETTI	ETTI	EUST	FICR
FICR	FICR	FICR	GCFL
GCFL	GCFL	GBHE	GRCA
GRCA	GRCA	GCFL	HETH
HETH	HOFI	GRCA	HOFI
HOFI	HOWR	HOFI	LOSH
HOWR	MODO	HOWR	MODO

Table 7: Continued

INBU	NOCA	HOSP	NOCA
MODO	NOFL	MODO	NOFL
NOCA	NOMO	NOCA	NOMO
NOMO	NOPA	NOFL	NOPA
NOPA	OSPY	NOMO	PAWA
OSPY	PAWA	NOPA	PIWA
OVEN	PIWO	OCWA	PIWO
PAWA	PROW*	ORORR	RBWO
PIWA	PRWA*	OSPR	RCKI
PIWO	RBWO	PIWO	RODO
RBWO	RCKI	RBWO	RSHA
RCKI	REVI	RCKI	RWBB
REVI	RODO	REVI	SACR
RSHA	RSHA	RODO	SACR
RWBB	RWBB	RSHA	TUVU
SUTA	SUTA	RWBB	UNID-egret
TRSW	TUVU	SUTA	UNID-gull
TUVU	UNID-gull	UNID-gull	WEVI
UNID-gull	YBCH	WEVI	WHIB
WEVI	YRWA	YBSA	YBSA
YBSA	YTWA	YRWA	YRWA
YRWA		YTWA	YTWA
YTWA			

Table 7: Continued

Lake Alice South	Biven's Rim Forest	Bivens Forest East	Lake Alice Main
AMCR	AMCR	AMCR	AMCR
AMGO	AMGO	AMGO	AMGO
AMRO	AMRO	AMRE	AMRO
ANHI	ANHI	AMRO	BAOR
BAEA	BAEA	ANHI	BAWW
BAOR	BAWW	BAEA	BDOW
BAWW	BEKI	BAOR	BGGC
BEKI	BGGC	BAWW	BHCO
BGGC	BHCO	BBWD	BHVI
BHCO	BLJA	BDOW	BLJA
BHVI	BRTH	BEKI	BOBO
BLJA	BTGR	BGGC	BRTH
BLVU	CACH	BHCO	BTGR
BRTH	CARW	BHVI	CACH
BTGR	CHSW	BLJA	CARW
CACH	COGR	BPWA	CEWA
CARW	COHA	BRTH	CHSW
CEWA	COYE	BTBW	COGR
CHSW	DCCO	BTGR	DOWO
COGR	DOWO	CACH	EAPH
DCCO	EABL	CARW	ETTI
DOWO	EAPH	CEWA	EUST
EABL	ETTI	CHSW	GBHE

Table 7: Continued

EAPH	FICR	COGR	FICR
ETTI	GBHE	COYE	GCFL
EUST	GCFL	DCCO	GRCA
FICR	GRCA	DOWO	GREG
GCFL	GREG	EAPH	HETH
GRCA	HETH	ETTI	HOFI
GREG	HOFI	FICR	HOWR
HETH	HOWR	GBHE	KILL
HOFI	IBIS	GCFL	MODO
HOSP	KILL	GRCA	NOCA
HOWR	LBHE	GRHE	NOFL
INBU	LOSH	HETH	NOMO
KILL	MODO	HOFI	NOPA
LOSH	NOCA	HOWR	NOWA
MODO	NOFL	INBU	OSPY
NOCA	NOMO	KILL	PAWA
NOFL	NOPA	MIKI	PIWA
NOMO	OSPR	MODO	PIWO
NOPA	PABU	NOCA	RBGU
OSPR	PAWA	NOFL	RBWO
PAWA	PIWA	NOMO	RCKI
PIWA	PIWO	NOPA	REVI
PIWO	PROW*	OSPY	RSHA
PUMA	PRWA	OVEN	RWBB
RBGU	RBWO	PAWA	SACR
RBWO	RCKI	PIWA	SWWA
RCKI	RODO	PIWO	SUTA
REVI	RSHA	PRWA	TUVU
RHWO	RTHA	RBWO	WEVI
RODO	RWBB	RCKI	WHIB
RSHA	SACR	REVI	WITU
RTHA	SNEG	RSHA	YBSA
RWBB	TUVU	RTHA	YRWA
SACR	UNID-sparrow	RTHU	YTWA
SSHA	WEVI	RWBB	
TRES	WHIB	SACR	
TUVU	YRWA	SNEG	
UNID-duck	YTVI*	SUTA	
WHIB	YTWA	TRES	
WTSP		TUVU	
YBSA		WEVI	
YRWA		WHIB	
		YBSA	
		YRWA	
		YTVI*	
		YTWA	

Table 7: Continued

McCarty Woods	Surge Wetlands
AMCR	AMCR
AMGO	AMGO
AMRE	AMRO
AMRO	BAWW
BAWW	BGGC
BHCO	BHCO
BLJA	BHVI
BRTH	BLJA
BPWA	BTGR
CACH	CACH
CARW	CARW
CEWA	CEWA
COGR	CHSW
DOWO	COGR
ETTI	COYE
FICR	DOWO
GCFL	EAPH
GRCA	ETTI
HETH	FICR
HOFI	GCFL
MODO	GRCA
NOCA	HETH
NOMO	HOSP
PROW	HOWR
RBWO	LBHE
RCKI	MODO
REVI	NOCA
UNID-gull	NOMO
WEWA	NOPA
YBSA	OSPY
YRWA	PAWA
	PIWA
	PIWO
	PRWA
	RBWO
	RCKI
	REVI
	RHWO
	RSHA
	RTHU
	RWBB
	SUTA
	TUVU
	WEVI
	YRWA
	YTVI

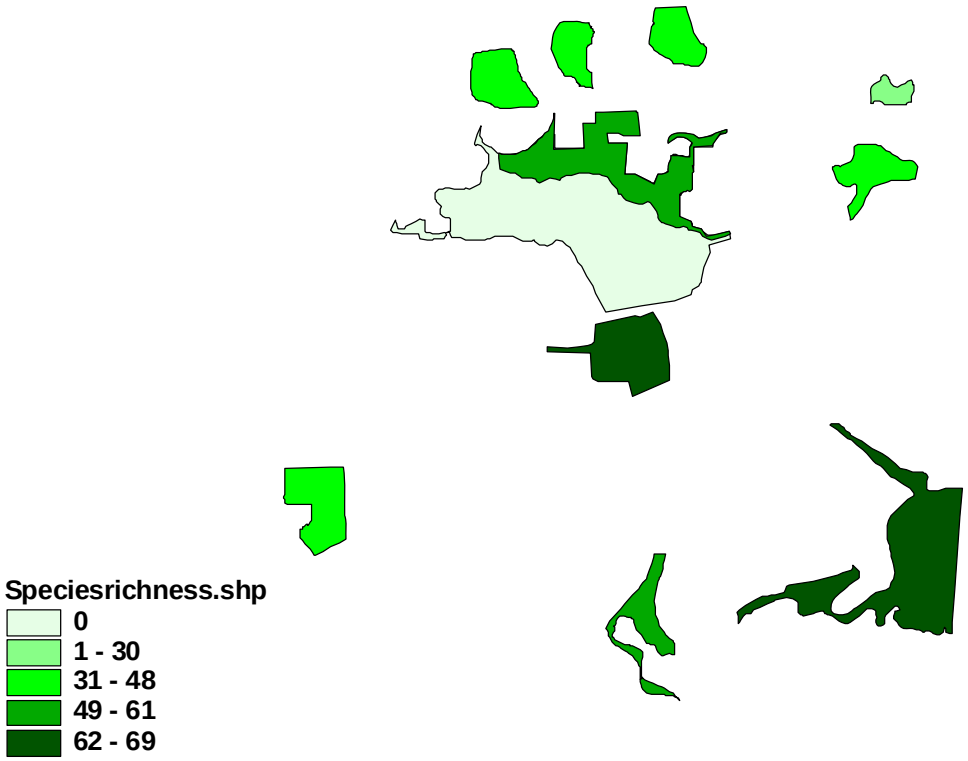

Figure 3: All sampled conservation areas depicted in terms of detected avian species richness (darker color indicates more species) in the University of Florida Conservation Areas between October 2004 and August.

Table 8: For each conservation area, the maximum abundances of each bird species detected at each point during one survey within a 40m sample radius over all dates sampled in the University of Florida Conservation Areas

*=Migrant Point Count
UNID=Unidentified Species
Note: High UNID values generally indicate unidentifiable flocks

a. Harmonic Woods

Point ID	1	2	101*	102*	28
Edge/Interior	Edge	Interior	Edge	Interior	Edge
# of observations	32	29	4	4	15
Species	# individuals	# individuals	# individuals	# individuals	# individuals
AMCR	1	1			
AMGO	3	30			
AMRE		2			1
AMRO	15	29			
BAWW	1	1	1	1	1
BGGC	1	2			2
BHCO	2	1			1
BHVI		1			
BLJA	2	2	1		3
BRTH	2				
BTGR		1			
CACH	3	1			1
CARW	11	6	3	1	7
CEWA	1		2		
CHSW	1	1		2	1
DCCO	10				
DOWO	2	2	2	1	1
EAPH	1	1			1
ETTI	2	4	2		2
GCFL	2	2	1	1	2
GRCA	1	3		2	1
HOFI	1	3			1
HOWR	1	1		1	
INBU				1	
MODO	1	1			
NOCA	3	6	2	3	5
NOMO	1	1			2
NOPA	1	3	1	1	2
OSPR	1	1			
PAWA	1				
PIWA	1	1			2
PIWO		1			
RBWO	3	2	2	1	2

Table 8a: Continued

RCKI	5	2		3	2
REVI	1	2	1	1	2
RWBB		3			
SUTA	1				
TRES	1				
TUVU	1	1			1
UNID	20	5	3	1	
WEVI	1	1			
YBSA	1			1	
YRWA	6	3			5
YTWA	1	1	1	1	1

b. Fraternity Wetlands

Point ID	3	4	103*	104*
Edge/Interior	Edge	Interior	Edge	Interior
# of observations	32	32	4	4
Species	# individuals	# individuals	# individuals	# individuals
AMCR	2	2	1	
AMGO	18	7		
AMRE				2
AMRO	22	23		
BAWW	1			
BGGC	3	1		
BHCO	10	4	1	
BLJA	3	4	1	2
BRTH	3	1		
CACH	2	2	2	
CARW	3	5	2	3
CEWA	6	22		
CHSW	16	3	1	1
DOWO	1	1	1	
EAPH		3		
ETTI	3	1	2	1
FICR		1		
GCFL	3	2	3	1
GRCA	1	1		1
HOFI	5	2	1	
HOWR	1	1	1	1
MODO	3	3	1	
NOCA	3	4	5	5
NOFL	1			
NOMO	3	3	1	
NOPA	2	2	1	
OSPR	2	1		

Table 8b: Continued

PAWA		1		
PIWO	2	1		
RBWO	2	3	1	2
RCKI	3	3	2	1
REVI	1	1	1	
RODO	1			
RWBB	20	1		
SUTA		1		
TRES	1			
TUVU		1		
UNID	4	4	2	
YBCH	1			
YRWA	5	4		2
YTWA	1			

c. Graham Woods

Point ID	5	6	105*	106*
Edge/Interior	Edge	Interior	Edge	Interior
# of observations	31	29	4	4
Species	# individuals	# individuals	# individuals	# individuals
AMCR	6	16	3	
AMGO	2	2	1	
AMRE	3	1		
AMRO	28	60		
BAOR	2	1	6	
BAWW	2	1		
BGGC	1	1		
BHCO		2	1	
BLJA	2	2		1
CACH	1	2		
CARW	6	6	1	6
CEWA	3		1	1
CHSW			2	
COGR	3			
COYE	1	1		
DCCO	1	2		
DOWO	3	1		
EAPH	1			
ETTI	1	4	1	
FICR	1	1	1	
GBHE	1			
GCFL	3	3	2	2
GRCA	2	2	1	1
HOFI	2	1		

Table 8c: Continued

HOSP			1	
HOWR	1	1		
MODO	1		2	
NOCA	4	4	2	5
NOFL	1			
NOMO	2	2	3	
NOPA	1			
OCWA		1		
OROR	1			
OSPR	1	2		
PIWO		1		
RBWO	2	2	1	1
RCKI	2	3	1	2
REVI				1
RODO	1			
RSHA		2		
RWBB	3			1
SUTA	1			
UNID	14	7	5	1
WEVI	1			
YBSA	1	1		1
YRWA	5	3		

d. Health Center Park

Point ID	7	8	107*	108*
Edge/Interior	Interior	Edge	Interior	Edge
# of observations	31	30	4	4
Species	# individuals	# individuals	# individuals	# individuals
AMCR	2	6		2
AMGO	4	1		1
AMRO	63	119		
BAWW	1	1	1	
BEKI	1			
BGGC	2	2		
BHCO	3	5	5	
BLJA	4	4	2	2
BRTH	1	1	1	
BTGR	1	2		
CACH	1	2		
CARW	4	4	3	2
CEWA	2	3		
CHSW		1	2	
COGR			1	
DOWO	2	1	1	

Table 8d: Continued

EAPH		1		
ETTI	3	2	1	
FICR		1		
GCFL	3	4	3	2
GRCA	1			1
HETH	1			
HOFI	1	2	1	
LOSH		1		
MODO		10	2	
NOCA	5	4	2	3
NOFL		1		
NOMO	2	4	3	2
NOPA	1	1		
PAWA	3	3		
PIWA	2			
PIWO	1			
RBWO	3	3	1	1
RCKI	3	2	1	1
RODO	2	3		
RSHA	1			
RWBB	2	30		
SACR	1			
TUVU	1			
UNID	4	11		1
WEVI	1			
WHIB	1			
YBSA	1			
YRWA	4	6		
YTWA	2			

e. McCarty Woods

Point ID	9	109*
Edge/Interior	N/A	N/A
# of observations	31	4
Species	# individuals	# individuals
AMCR	12	1
AMGO	2	
AMRE	1	
AMRO	109	
BAWW	1	
BHCO	1	
BLJA	2	
BRTH	2	2
CACH	1	

Table 8e: Continued

CARW	3	3
CEWA	9	
COGR	1	
DOWO	1	
ETTI	3	3
FICR	2	
GCFL	2	3
GRCA	1	
HETH	1	
HOFI	3	1
MODO	3	1
NOCA	4	3
NOMO	4	2
PROW	1	
RBWO	1	
RCKI	1	1
REVI	1	1
UNID	5	
YBSA	1	
YRWA	5	

f. Lake Alice South

Point ID Edge/Interior # of observations	10 Edge 30	11 Interior 30	12 Edge 29	111* Interior 3
Species	# of individuals	# of individuals	# of individuals	# of individuals
AMCR	1	1	2	1
AMGO	11	5	1	
AMRO	7	25	13	
ANHI	2			
BAEA	1		1	
BAOR	1		1	
BAWW	1	1		
BEKI	3			
BGGC	2	2		
BHCO	20	2		
BHVI	1	1		
BLJA	2	2	3	1
BLVU			5	
BRTH		1	1	
BTGR	2	1	1	
CACH	1	2		
CARW	2	4	2	2
CHSW	6	1	2	

Table 8f: Continued

COGR		2		
DCCO	1	5		
DOWO	1	2	1	
EABL	2		3	
EAPH	1	1		
ETTI	2	1	1	1
EUST			3	
FICR		1		
GCFL	3	2	2	4
GRCA	6	2		3
GREG			1	
HETH		1		
HOFI	4	8	2	1
HOWR		1		1
INBU		1		
KILL	4			
LOSH	3			
MODO	18	5	10	1
NOCA	3	5	1	2
NOFL	1	1		
NOMO	2	2	4	
NOPA	2	1		
OSPR	2	1	2	
PAWA	2		13	
PIWA		1	1	
PIWO	1	1	1	
PUMA	1	1		
RBGU	5		2	
RBWO	1	2	1	1
RCKI	2	2		1
RHWO		1	2	
RODO		3	4	
RSHA	2			
RTHA			1	
RWBB	30	6	30	
SACR			60	
SSHA			1	
TRES			3	
TUVU	1	2	1	
UNID	10	21	29	1
WHIB	1	1		
YBSA	1	1		
YRWA	5	3	2	

g. Biven's Rim Forest

Point ID	14	15	114*	115*
Edge/Interior	N/A	N/A	N/A	N/A
# of observations	30	29	3	3
Species	# of individuals	# of individuals	# of individuals	# of individuals
AMCR	5	1		
AMGO	4	5		
AMRO	7	11		
ANHI	1	2		
BAEA	1	1		
BAWW	1			
BEKI	1	2		
BGGC	1	1		
BHCO	1	1	1	2
BLJA	2	2		
BRTH	1	1		
BTGR	1	2		1
CACH	3	2		
CARW	1	2		2
CHSW	2		1	
COGR	1	1		
COYE	2			2
DCCO	2	7		
DOWO	3	2		
EABL	1			
EAPH		1		
ETTI	1	1		1
FICR		2		
GBHE	1	2		
GCFL			1	
GRCA	1	2		1
GREG	2	2		
HOFI	2			
HOWR	2	1		
KILL	1			
LBHE	2			
MODO	5	2	1	
NOCA	4	3	3	1
NOFL		1		
NOMO	2	1	1	
NOPA	1	1		1
OSPR	2	3		1
PABU	1			
PAWA	1		3	
PIWO		1		
RBWO	3	1	1	1
RCKI	3	3	1	2
REVI		1	1	

Table 8g: Continued

RODO		5		2
RSHA	2	1		1
RWBB	3	11		2
SACR		4		
SNEG	1			
TUVU	3	1		
UNID	15	7	1	2
WEVI	1	2	1	1
WHIB	1			
YRWA	15	3		
YTWA		1		

h. Biven's Forest East

Point ID	16	17	18	19	31
Edge/Interior	Edge	Edge	Interior	Interior	Interior
# of observations	29	29	28	27	11
Species	# of individuals	# of individuals	# of individuals	# of individuals	# of individuals
AMCR		1	2	3	1
AMGO	1	3	8	1	
AMRE		2	1		2
AMRO	2	5	10	1	
ANHI		2	1	1	
BAEA	3	2		1	
BAOR		1			
BAOW			2		
BAWW	1		1	1	
BEKI				2	
BGGC	1	1	1	2	
BHCO	1	3			
BHVI	1			1	
BLJA	3	4	4	1	2
BPWA					1
BRTH	2				1
BTBW			2		
BTGR				2	
CACH	1	1		2	
CARW	3	4	3	4	4
CEWA	20		3	2	
CHSW				1	
COGR		1			
COYE				1	
DCCO	2		1	3	
DOWO		1	1	1	1
EAPH		1	2	2	

Table 8h: Continued

ETTI	2	2	2	2	1
FICR		2	1		
GBHE			1	1	
GCFL	2	2	2	2	1
GRCA	1	2	1	1	1
HETH				1	1
HOFI	1		1	1	
HOWR	2				
MODO	2	3	2		
NOCA	6	4	3	3	3
NOFL			1	1	
NOMO	2	2	2	1	
NOPA	1	1	2	1	2
OSPR	1	1	1	1	
OVEN			1		
PAWA	6			1	1
PIWA	1				
PIWO	1	1	2	1	
PRWA	1				
RBWO	2	3	3	1	1
RCKI	3	4	1	2	
REVI		1	1	1	1
RSHA	3		1		1
RTHA		1			
RWBB		20	11	15	
TRES			1		
TUVU	1	1	1		
UNID	3	4	23	4	2
WEVI	1	1	1		
WHIB	3				
YBSA	1		2	1	
YRWA	4	20	10	15	2
YTWA	2		1		

h. Biven's Forest East continued:

Point ID	116*	117*	118*	119*	200*
Edge/Interior	Edge	Edge	Interior	Interior	Edge
# of observations	3	3	3	3	3
Species	# of individuals	# of individuals	# of individuals	# of individuals	# of individuals
AMCR					
AMGO					
AMRE					
AMRO					
ANHI					

Table 8h: Continued

BAEA					
BAOR					
BAOW					
BAWW				1	
BEKI		1			
BGGC					
BHCO		1			
BHVI					
BLJA		1	1	1	2
BPWA					
BRTH					
BTBW					
BTGR					
CACH	1	1			
CARW	2	2	1	2	2
CEWA	1			5	
CHSW					
COGR					
COYE					
DCCO					
DOWO	1		1	1	
EAPH					
ETTI				1	
FICR					
GBHE					
GCFL	1	2	4		1
GRCA	1	1	3	1	
HETH					
HOFI					
HOWR					
MODO					
NOCA	2	3		3	2
NOFL					
NOMO					
NOPA		2	1	1	
OSPR					
OVEN					
PAWA					
PIWA					
PIWO		1			
PRWA					
RBWO	2		2	1	
RCKI			1		
REVI			1		
RSHA					
RTHA					
RWBB					
TRES					
TUVU					

UNID	1	1	1	10	
WEVI	2		1		1
WHIB					
YBSA					
YRWA		2			
YTWA					

i. Lake Alice Conservation Area

Point ID	20	21	22
Edge/Interior	Edge	Interior	Interior
# of observations	19	15	15
Species	# of individuals	# of individuals	# of individuals
AMCR	1	9	1
AMGO	1	5	2
AMRO	4	1	1
BAOL			1
BAOR			
BAWW	1	1	
BGGC	1	1	1
BHCO	1	1	
BHVI			1
BLJA	1	2	
BRTH		1	
BTGR			
CACH	1	2	2
CARW	6	7	3
CEWA	1		
CHSW	1		4
COGR	2		2
DOWO		1	2
EAPH	2		1
ETTI	2	4	4
FICR	2		
GBHE			
GCFL	2	2	2
GRCA	2	1	1
GREG	1		
HETH	1		
HOFI			1
HOWR	1		1
MODO			2
NOCA	3	4	3
NOMO	2		
NOPA	1	2	2
OSPR		1	1
PAWA	2		2

Table 8i: Continued

PIWA		3	
PIWO			1
RBWO	2	1	1
RCKI	2	2	3
REVI			2
RSHA			
RWBB			
SWWA	1		
TUVU			1
UNID	2	1	131
WEVI	1	1	2
WHIB			2
WITU	1		
YBSA	1	1	1
YRWA	4	3	6
YTWA		1	1

i. Lake Alice Conservation Area continued:

Point ID	23	33	34
Edge/Interior	Edge	Interior	Edge
# of observations	18	10	10
Species	# of individuals	# of individuals	# of individuals
AMCR			1
AMGO	1		
AMRO	30		
BAOL			1
BAOR			1
BAWW		2	1
BGGC	2		
BHCO			
BHVI	1		
BLJA	3	2	4
BRTH	1		
BTGR	1		
CACH	1	1	
CARW	3	6	4
CEWA			
CHSW	2		1
COGR	1		
DOWO		1	
EAPH	1		
ETTI	2	1	
FICR		2	2
GBHE			1

Table 8i: Continued

GCFL	4	1	2
GRCA	2	1	2
GREG			
HETH			
HOFI	3		
HOWR	1		
MODO	2		
NOCA	4	4	3
NOMO	1		
NOPA		1	1
OSPR	1		1
PAWA	2		
PIWA			
PIWO	1	1	
RBWO	1	2	1
RCKI	2	1	2
REVI		1	1
RSHA	1		
RWBB	3		
SWWA			
TUVU	1		
UNID	11		1
WEVI		1	2
WHIB			
WITU			
YBSA	1	1	
YRWA	9	10	
YTWA			

j. Surge Wetlands

Point ID	24	25	35
Edge/Interior	N/A	N/A	N/A
# of observations	18	16	9
Species	# of individuals	# of individuals	# of individuals
AMCR	2	2	
AMGO	1	3	
AMRO	1		
BAWW	1		
BGGC	1		
BHCO	1	1	1
BHVI		1	
BLJA	1	1	1
BTGR	2	1	1
CACH	2		1

Table 8j: Continued

CARW	2	2	3
CEWA		2	
CHSW		1	
COGR	1		1
COYE	1		
DOWO	2	2	1
ETTI	2	1	1
GCFL	1	3	1
GRCA	1	1	1
HOFI		1	
HOSP		1	
LBHE			1
MODO	1		1
NOCA	2	3	4
NOMO	1		2
NOPA	1	2	
PAWA	1		1
PIWA	1	1	1
PIWO		1	1
RBWO	2	2	2
RCKI	1	2	1
REVI		1	1
RHWO	2		
RSHA	1		
RTHU	1		
RWBB	1		1
SUTA	1	1	
TUVU	1	1	
UNID	5	1	7
WEVI		1	
YRWA	6	5	

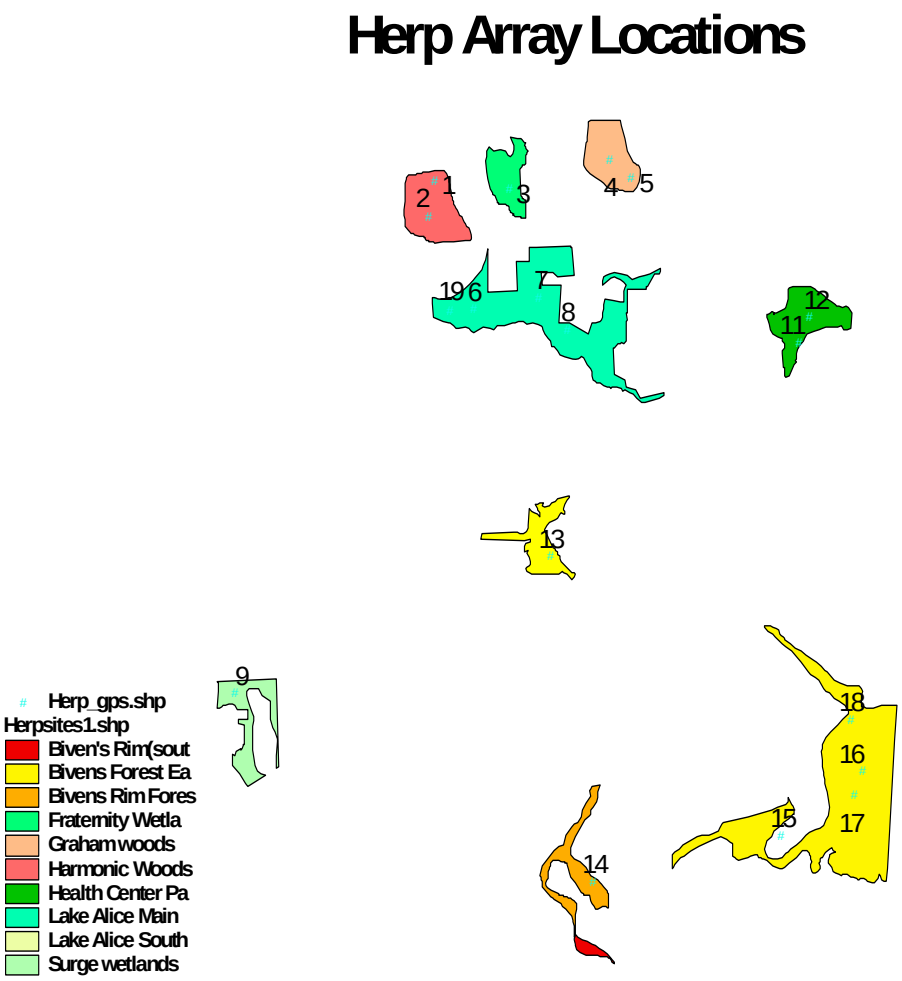

Figure 4: Locations of herpetofaunal arrays within the University of Florida Conservation Areas

Table 9: GPS locations of Herpetofaunal arrays within the University of Florida Conservation Areas

Area	Edge/Interior/N/A	ID #	Latitude(29 deg N)	Longitude(82 deg W)
HW	E	1	38' 48.2"	21' 31.6"
HW	I	2	38' 44.7"	21' 32.4"
FW	N/A	3	38' 47.2"	21' 21.8"
GW	I	4	38' 49.8"	21' 8.6"
GW	E	5	38' 48.0"	21' 5.8"
LAM	I	6	38' 35.6"	21' 26.7"
LAM	I	7	38' 36.5"	21' 18.1"
LAM	E	8	38' 34.5"	21' 14.4"
LAM	E	19	38' 35.6"	21' 29.8"
SW	N/A	9	37' 59.0"	21' 58.8"
HCP	E	11	38' 31.7"	20' 44.2"
HCP	I	12	38' 34.1"	20' 42.7"
LAS	N/A	13	38' 11.5"	21' 17.2"
BRF	N/A	14	37' 39.9"	21' 12.2"
BFE	E	15	37' 44.0"	20' 47.5"
BFE	I	16	37' 50.1"	20' 36.8"
BFE	I	17	37' 47.5"	20' 37.9"
BFE	E	18	37' 55.1"	20' 38.2"

Table 10: All herp species detected between October 2004 and August 2005 in the University of Florida Conservation Areas; grouped by taxa

	Amphibians	
	Scientific name	**Common name**
Frogs	*Bufo terrestris*	Southern toad
	** *Eleutherodactylus planirostris sp.*	Greenhouse frog
	Gastrophryne carolinenis	Eastern narrowmouth toad
	Hyla cinera	Green treefrog
	Hyla gratiosa	Barking treefrog
	Hyla squirella	Squirrel treefrog
	Rana catesbiana	Bull frog
	Rana clamitans	Bronze frog
	Rana grylio	Pig frog
	Rana sphenocephalus	Southern leopard frog
	Scaphiopus holbrookii	Eastern spadefoot toad
Salamanders	*Eurycea quadrdigitata*	Dwarf salamander
	Reptiles	

Table 10: Continued

	Scientific name	Common name
Crocodillians	*Alligator mississipiensis*	American alligator
Lizards	*Anolis carolinensis*	Green anole
	***Anolis sagrei*	Cuban brown anole
	Eumeces fasciatus	Five-lined skink
	Eumeces laticeps	Broad-headed skink
	Scincella lateralis	Common ground skink
Snakes	**Agkistrodon piscivorous*	Eastern cottonmouth
	Coluber constrictor	Black racer
	Diadolphus punctatus	Southern ringneck snake
	Farancia abacura	Mud Snake
	Nerodia fasciata fasciata	Banded watersnake
	Nerodia fasciata pictiventris	Florida watersnake
	Rhadinaea flavilata	Pinewoods Snake
	Thamnophis sauritus sp	Eastern ribbon snake
	Thamnophis sirtalis sirtalis	Eastern garter snake
Turtles	*Apalone ferox*	Florida softshell turtle
	Chelydra serpentina	Common snapping turtle
	Dierochlemys reticularia	Chicken turtle
	Kinosternon baurii	Striped mud turtle
	**Kinosternon subrubrum*	Eastern mud turtle
	Pseudemys floridana penisularis	Penisular cooter
	Terrepene carolinana bauri	Florida box turtle
	Trachemys scripta scripta	Yellow-bellied slider

*=exotic
**=sited but not positively ID'd

Table 11: Species of herps detected per conservation area between October 2004 and August 2005 in the University of Florida Conservation Areas

Harmonic Woods	Fraternity Wetlands	Graham Woods
Anolis sagrei	Anolis sagrei	Anolis sagrei
Bufo terrestris	Eleutherodactylus planirostris sp.	Rana clamitans
Diadolphus punctatus	Hyla squirrela	
Eleutherodactylus planirostris sp.	Rana clamitans	
Hyla cinera	Scincella lateralis	
Hyla squirella	Terrepene carolina bauri	
Rana clamitans	Thamnophis sirtalis	
Rhadinaea flavilata		
Scincella lateralis		
Thamnophis sirtalis		

Table 11: Continued

Health Center Park	McCarty Woods	Lake Alice South
Alligator mississipiensis	Anolis sagrei	Anolis carolensis
Anolis sagrei	Eumece fasciata or inexpectatus	Anolis sagrei
Eleutherodactylus planirostris sp.	Hyla squirella	Chelydra serpentina
Hyla cinera	Diadolphus puctatus	Gastrophryne carolinensis
Scincella lateralis		Hyla squirella
		Nerodia fasciata pictiventris
		Rana clamitans
		Rana grylio
		Terrepene carolina bauri

Lake Alice Main	Bivens' Forest East	Biven's Rim Forest
Alligator mississipiensis	Alligator mississipiensis	Anolis sagrei
Anolis sagrei	Anolis carolinensis	Anolis carolinensis
Apalone ferox	Anolis sagrei	Bufo terrestris
Coluber constrictor	Apalone ferox	Coluber constrictor
Eleutherodactylus planirostris sp.	Bufo terrestris	Eleutherodactylus planirostris sp.
Eumeces fasciatus	Chelydra serpentina	Eumeces fasciatus
Eumeces fasciatus or inexpectatus	Coluber constrictor	Eumeces laticeps
Eumeces laticeps	Eleutherodactylus planirostris sp.	Gastrophryne carolinenis
Eurycea quadrdigitata	Eumeces fasciatus	Hyla cinera
Farancia abacura	Eumeces laticeps	Hyla squirella
Gastrophryne carolinenis	Gastrophryne carolinenis	Rana catesbiana
Hyla cinera	Hyla squirella	Rana clamitans
Hyla gratiosa	Kinosternon baurii	Rana grylio
Hyla squirella	Rana catesbiana	Rana sphenocephala
Nerodia fasciata fasciata	Rana clamitans	
Nerodia fasciata pictiventris	Rana sphenocephalus	
Pseudemys floridana penisularis	Scaphiopus holbrookii	
Rana clamitans	Scincella laticeps	
Rana sphenocephalus	Terrepene carolinana bauri	
Scincella lateralis	Thamnophis sirtalis	
Thamnophis sauritus sp.	UNID Kinosternid or Sternotherid turtle	
Thamnophis sirtalis sirtalis		
Trachemys scripta scripta		

Surge Wetlands
Anolis sagrei
Bufo terrestris

Table 11: Continued

Diadolphus punctatus
Dierochlemys reticularia
Eleutherodactylus planirostris sp.
Eumeces faciatus
Gastrophryne carolinenis
Hyla cinera
Hyla squirella
Rana clamitans
Rana grylio
Rana sphenocephala
Scaphiopus holbrookii
Thamnophis sirtalis

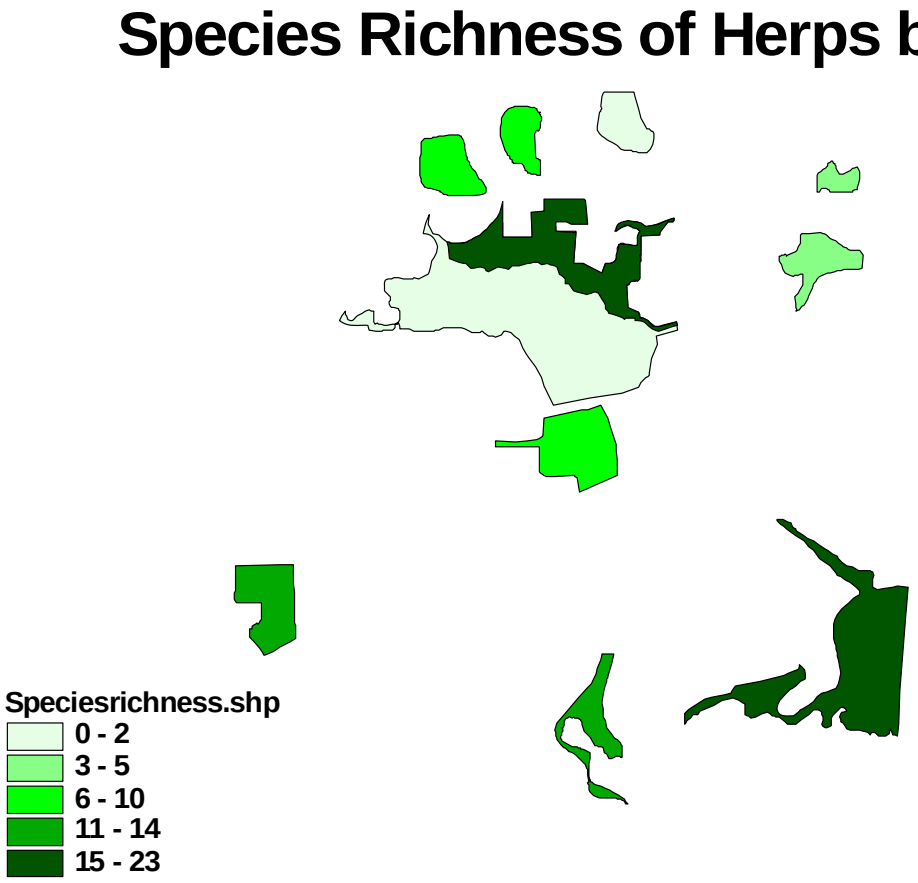

Figure 5: All sampled conservation areas depicted in terms of detected herpetofaunal species richness (darker color indicates more species) in the University of Florida Conservation Areas between October 2004 and August 2005.

Table 12: Total number of individuals per species of herps captured per herpetofaunal trapping array over all trapping dates between 5/2005 and 8/2005 in the University of Florida Conservation Areas

a. Harmonic Woods

Herp Array ID	1	2
Edge/Interior	Edge	Interior
# of Observations	24	24
Species	# individuals	# individuals
Anolis sagrei	3	2
Bufo terrestris	1	
Eleutherodactylus planirostris sp.	4	3
Hyla cinera		2
Rana clamitans	9	7
Rana sphenocephalus		1
Rhadinaea flavilata	1	
Scincella lateralis	18	5
Thamnophis sirtalis		1

b. Fraternity Wetlands

Herp Array ID	3
Edge/Interior	N/A
# of Observations	24
Species	# individuals
Anolis sagrei	1
Eleutherodactylus planirostris sp.	19
Rana clamitans	1
Scincella lateralis	4
Thamnophis sirtalis	1

c. Graham Woods

Herp Array ID #	5	4
Edge/Interior	Edge	Interior
# of Observations	24	24

Table 10c: Continued

Species	# individuals	# individuals
Anolis sagrei		1
Rana clamitans	6	1

d. Health Center Park

Herp Array ID #	11	12
Edge/Interior	Edge	Interior
# of Observations	23	23
Species	# individuals	# individuals
Anolis sagrei	2	8
Eleutherodactylus planirostris sp.	2	2
Hyla cinera	4	
Scincella lateralis	2	6

e. Lake Alice South

Herp Array ID #	13
Edge/Interior	N/A
# of Observations	23
Species	# individuals
Anolis sagrei	3
Hyla squirella	8
Rana clamitans	7

f. Biven's Rim Forest

Herp Array ID #	14
Edge/Interior	N/A
# of Observations	23
Species	# individuals
Anolis sagrei	1
Bufo terrestris	7
Eleutherodactylus planirostris sp.	5
Eumeces fasciatus	1
Gastrophryne carolinenis	2
Hyla cinera	1
Hyla squirella	6
Rana clamitans	4

Table 12f: Continued

Rana sphenocephalus	2
Scincella lateralis	3

g. Biven's Forest East

Herp Array ID #	15	18	16	17
Edge/Interior	Edge	Edge	Interior	Interior
# of Observations	22	22	21	21
Species	# individuals	# individuals	# individuals	# individuals
Anolis carolinensis		1	1	
Anolis sagrei		8		
Bufo terrestris		1	14	8
Coluber constrictor		2		
Eleutherodactylus planirostris sp.	3	5		
Eumeces fasciatus		3		
Eumeces laticeps		1		
Gastrophryne carolinenis	2	5		
Hyla squirella	116	25	8	21
Rana catesbiana	1			
Rana clamitans	41	10	3	12
Rana sphenocephalus	1		1	
Scaphiopus holbrookii	2	2		
Scincella lateralis	3			
Thamnophis sirtalis sirtalis		1		

h. Lake Alice Conservation Area

Herp Array ID #	8	19	6	7
Edge/Interior	Edge	Edge	Interior	Interior
# of Observations	23	23	23	23
Species	# individuals	# individuals	# individuals	# individuals
Anolis sagrei	6	2		1
Coluber constrictor	1	1	1	1
Eleutherodactylus planirostris sp.		1		
Eumeces fasciatus				3
Eurycea quadridigitata		2		
Farancia abacura	1			
Gastrophryne carolinenis	3	4	4	7
Hyla cinera	1	1		2
Hyla gratiosa		1		
Hyla squirella	2		1	1
Rana clamitans	3	33	10	6

Table 12h: Continued

Rana sphenocephalus	17	14	9	3
Scincella lateralis	9	1	1	2

i. Surge Wetlands

Herp Array ID #	9
Edge/Interior	N/A
# of Observations	23
Species	# individuals
Anolis sagrei	3
Bufo terrestris	123
Diadolphus punctatus	3
Eleutherodactylus planirostris sp.	5
Eumeces fasciatus	3
Gastrophryne carolinenis	5
Hyla cinera	1
Hyla squirella	12
Rana clamitans	6
Rana sphenocephalus	3
Scaphiopus holbrookii	3
Thamnophis sirtalis sirtalis	1

k. McCarty Woods

McCarty Woods
Visual Survey
1
Species
Anolis sagrei
Diadolphus punctatus
Eumeces sp.

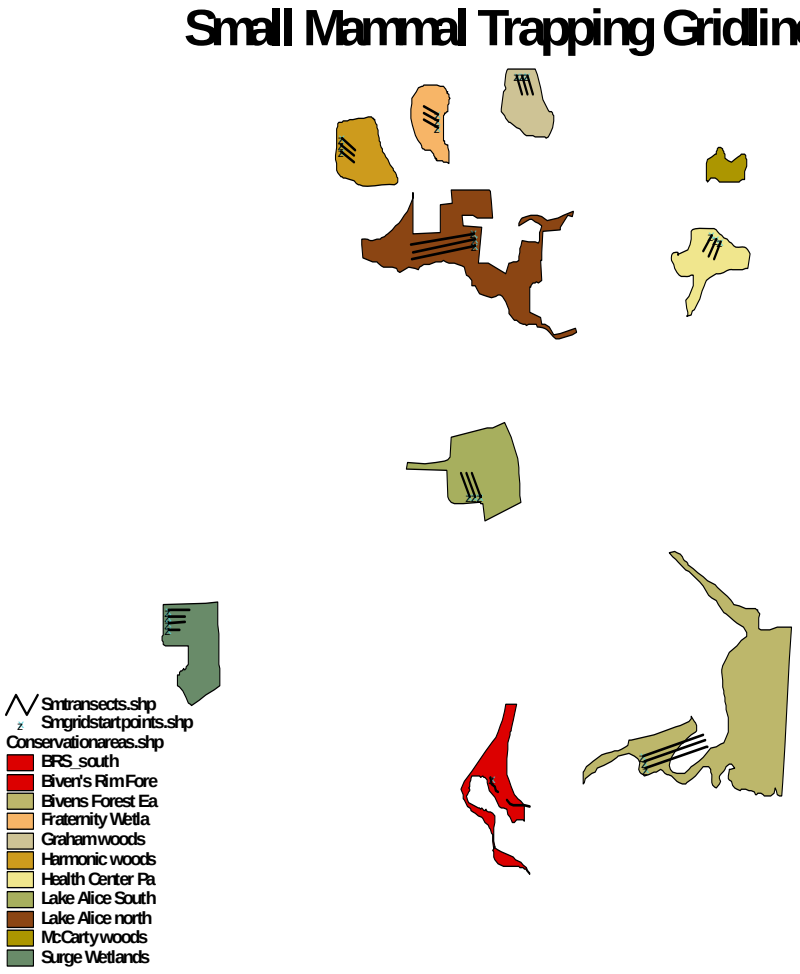

Figure 6: Locations of small mammal trapping grids within the University of Florida Conservation Areas.

Table 13: GPS coordinates of edge-starting points of small mammal trapping grids.

Area	LINE	Long(82 deg W)	Lat(29 deg N)	No. trap stations	Transect Bearing
Harmonic Woods	A	21' 34.78"	38' 46.33"	12	124 deg
	B	21' 34.73"	38' 46.98"		
	C	21' 34.82"	38' 45.68"		
Fraternity Wetlands	A	21" 21.07"	38' 48.54"	12	295 deg
	B	21' 21.04"	38' 49.19"		
	C	21' 21.05"	38' 47.90"		
Graham Woods	A	21' 9.76"	38' 52.97"	12	163 deg
	B	21' 10.52"	38' 52.97"		
	C	21' 9.02	38" 52.96"		
Health Center Park	A	20' 41.98"	38' 35.95"	15	207 deg
	B	20' 42.57"	38' 36.36"		
	C	20' 41.57"	38' 35.63"		
Lake Alice South	A	21' 18.11"	38' 10.42"	15	335 deg
	B	21' 17.37"	38' 10.39"		
	C	21' 21.63"	38' 10.38"		
Biven's Rim Forest	A			7	N/A
Bivens Forest East	A	20' 53.44"	37' 43.65"	36	74 deg
	B	20' 53.22"	37" 43.02"		
	C	20' 53.02"	37" 42.36"		
Lake Alice Main	A	21' 16.04"	38' 36.47"	36	261 deg
	B	21' 16.23"			
	C				
Surge Wetlands	A	22' 0.21"	37' 59.51"	15	90 deg
	B	22' 0.23"	37' 58.26"		
	C	22' 0.24"	37" 58.21"		
	D	22' 0.28"	37' 57.55"		

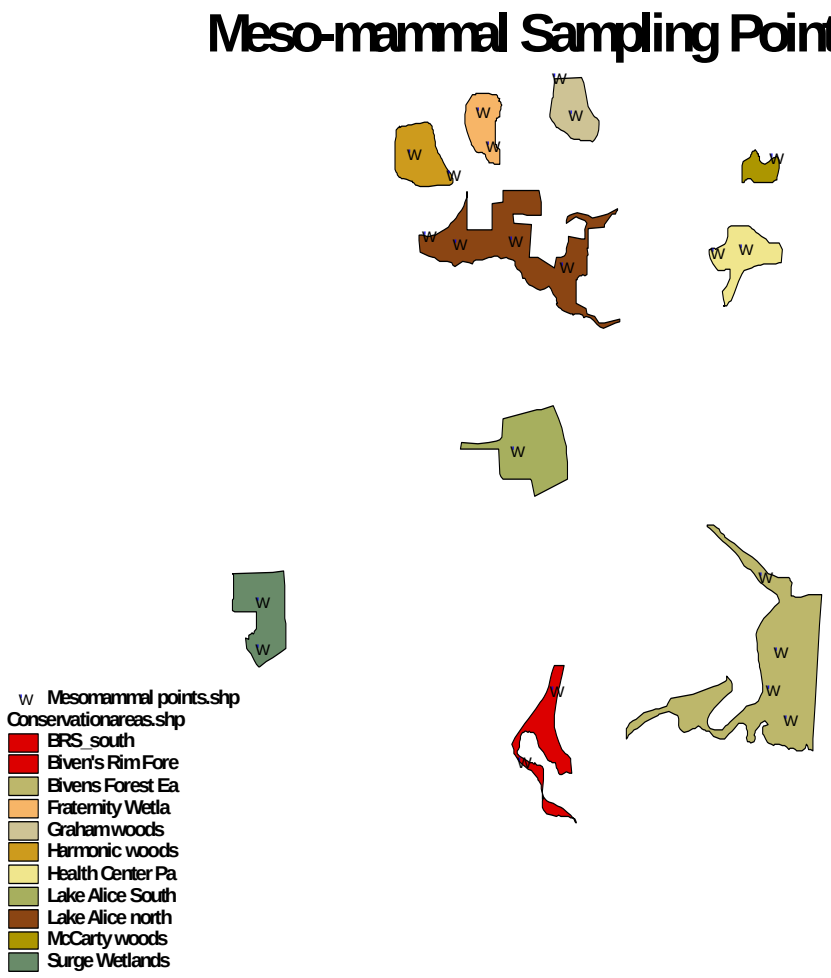

Figure 7: Meso-mammal sampling locations within the University of Florida Conservation areas.

Table 14: GPS coordinates of meso-mammal sampling locations within the University of Florida Conservation Areas

ID	LONG: 82 deg	LAT: 29 deg	ID	LONG: 82 deg	LAT: 29 deg
1	21' 33.0"	38' 45.6"	13	21' 10.2"	38' 32.8"
2	21' 27.1"	38' 43.1"	14	21' 18.0"	38' 12.8"
3	21' 22.5"	38' 49.9"	15	21' 12.3"	38' 10.5"
4	21' 21.1"	38' 46.2"	16	21' 16.3"	38' 15.9"
5	21' 8.5"	38' 49.4"	17	21' 17.8"	37' 38.6"
6	21' 10.8"	38' 53.5"	18	21' 12.7"	37' 46.4"
7	20' 47.4"	38' 34.0"	19	20' 38.9"	37' 50.1"
8	20' 43.1"	38' 34.4"	20	20' 37.5"	37" 42.6"
9	20' 38.2"	38' 44.2"	21	20' 40.1"	37' 46.0"
10	21' 17.9"	38' 35.9"	22	20' 40.9"	37' 58.4"
11	21' 26.2"	38' 35.7"	23	21' 56.9"	37' 56.9"
12	21' 30.8"	38' 36.6"	24	21' 57.0"	37' 51.6"

Table 15: Total mammal species detected between October 2004 and August 2005 in the University of Florida Conservation Areas.

	Scientific Name	**Common Name**
Small mammals	*Peromyscus gossypinus*	Cotton mouse
	Peromyscus polionotus	Oldfield Mouse
	Rattus norvegicus	Norway Rat
	Rattus rattus	Black Rat
	Sigmadon hispidus	Hispid Cotton Rat
	Sciurus carolinensis	Gray Squirrel
Meso-mammals	*Dasypus novemcinctus*	Armadillo
	Didelphis virginiaus	Virginia Oppossum
	Felis domesticus	Feral Cat
	Procyon lotor	Common Racoon
	Urocyon cinereoargenteus	Grey Fox

Table 16: Total mammal species detected per area between October 2004 and August 2005 in the University of Florida Conservation Areas

Harmonic Woods	Fraternity Wetlands	Graham Woods
**Peromyscus polionotus*	*Rattus rattus*	*Rattus norvegicus*

Table 16: Continued

Peromyscus gossypinus *Rattus norvegicus* *Rattus rattus* *Sciurus carolinensis*	*Sciurus carolinensis*	*Rattus rattus* *Sciurus carolinensis*
Dasypus novemcinctus *Procyon lotor*	*Dasypus novemcinctus* *Procyon lotor*	*Felis domesticus* *Procyon lotor*
Health Center Park	**McCarty Woods**	**Lake Alice South**
Peromyscus gossypinus *Rattus norvegicus* *Rattus rattus* *Sciurus carolinensis*	*Sciurus carolinensis*	*Rattus rattus* *Sciurus carolinensis*
Didelphis virginiaus *Procyon lotor*	*Procyon lotor*	*Dasypus novemcinctus* *Felis domesticus* *Procyon lotor*
Bivens Forest East	**Biven's Rim Forest**	**Lake Alice Main**
**Peromyscus polionotus* *Rattus rattus* *Sciurus carolinensis*	*Peromyscus gossypinus* *Sciurus carolinensis*	**Rattus rattus* *Peromyscus gossypinus* *Sciurus carolinensis* *Sigmadon hispidus*
Dasypus novemcinctus *Felis domesticus* *Procyon lotor* *Urocyon cinereoargenteus*	*Procyon lotor* *Dasypus novemcinctus*	*Dasypus novemcinctus* *Felis domesticus* *Procyon lotor* *Didelphis virginiaus*
Surge Wetlands		Legend
Sciurus carolinensis		Red=Small Mammal
		Blue=Meso-Mammal
Felis domesticus *Procyon lotor*		* =Detected through dead specimen found

Table 17. Small mammal captures per area in the University of Florida Conservation Areas over all trapping methods and dates.

Grid Method- 1 attempt per group (7/12/2005-7/16/2005; 8/10/2005-8/14/2005)

Table 10: Continued

Area	Species	# of Individuals Caught
HW	*Rattus norvegicus*	1
	Rattus rattus	2
GW	*Rattus norvegicus*	1
HCP	*Peromyscus gossypinus*	2
	Rattus norvegicus	1
	Rattus rattus	1
LAM	*Peromyscus gossypinus*	9
BRF	*Peromyscus gossypinus*	3
Transect Method- 3 attempts (11/30/2004 12/03/2004; 1/25/2005-1/29/2005; 3/22/2005-3/26/2005)		
Area	Species	# of Individuals Caught
HW	*Peromyscus gossypinus*	1
	Rattus rattus	3
FW	*Rattus rattus*	3
GW	*Rattus rattus*	2
HCP	*Peromyscus gossypinus*	1
	Rattus rattus	2
LAS	*Rattus rattus*	1