

## Appendix A. Field notes for Florida wildfire plant study

### FALL SURVEY 1998

#### 10/18/98 - Osceola National Forest

- drove along FS Rd 250 to south end of oakhill fire.
- drove south on FS Rd 211 to Rd 284, *Sabatia* sp. along road, collected *Aristida* species, most bog plants in ditches along road, very dry flatwoods.
- turned around at FS Rd 284, burned over area (severely), cypress areas near junction of Rds 211 and 250 on south end of road.
- continued north along 211 to 232 north on 232, good cypress burn shortly after north along 232 on both sides of road, good insect infestations, White Ibis in cypress area feeding about 3/4 mile north just before junction of 232 and 262.
- went further along 232 to end of fire, still high ground, some swamp in places
- then turned around at 213 and headed back south along 232 to 262.
- headed west along 262, cypress-tupelo swamp burn. cool burn, good flatwoods open area on north side of 262 just before junction of 234.
- went south on 234 to 233 west along 233 to 236.
- went south along 236 to 263, dry flatwoods area, no bogs
- turned east along 263
- continued east along 263 to 250
- north along 250 to 250 A to Olustee

#### 10/29/98 - Heart Island Conservation Area

*Site 1* - flagged with pink flagging. Hwy 17 southbound at north end of Heart Island Conservation Area Fire, 0.5 miles north of SR-3. *Nemastylis floridana* site.

#### 10/30/98 - Tiger Bay State Forest

- went to office and met Ranger Dave, and Adrian
  - entered Tiger Bay at Powerline Rd
  - drove to Dark Entry Rd, took a right onto Dark Entry Rd.
  - went to Center Rd. Turned left.
  - went to Wampee Strand Rd turned left onto Wampee headed north.
- Site 1* - along Wampee Strand Rd. Flagged area with *Sabatia brevifolia* (*difformis*?), and interesting *Aristidas* and carex species.
- Site 2* - wet area about 0.6 miles from site 1 along Wampee Rd, wetland plants and composites present.
- took Wampee to North Rd, left on North Rd, blocked because of timber operations, so went east along North Rd to Center Rd. then south on Center Rd from North Rd. *LiliumCatesbei* found along Center Rd. also *Sarracenia minor* with no flowers.
  - went south along Center Rd, then west along Dark Entry Rd.
  - at junction of Dark Entry Rd and Powerline Rd there are more *L. Catesbaei*'s.
  - went north along Powerline Rd. to North Rd.
  - between Dark Entry Rd and along east side of road near log pile is wiregrass area, open field.
  - area north along Powerline Rd good for *Sarracenia minor* and liliiums.
  - turned east onto North Rd again.
  - went one mile turned around, on way back towards Powerline Rd along North Rd, about 0.6 miles west of Powerline Rd found *Helianthus* sp. , wiregrass, liliiums and *Sarracenas* in flower.

#### 10/31/98 - Heart Island Conservation Area

- west end of fire from Hwy 11 is hardwoods area, little flatwoods present.
- Site 1* - flagged on cypress where closed road enters, very nice site, possible *Hartwrightia* and *Asimina* sites in field and along forest edge, longleaf okay where planted, rx burn here?
- Site 2* - no notes
- Site 3* - north along road to east from Island Rd. In salvage areas where salvage occurred early in the year stuff coming back already. Longleaf pine areas okay in field definitely need to come back in spring. Plants seen include *Asclepias pedicillata*, *Lacnantes*, *Aristida*, other grasses, *Asimina*, *Carpheporous*, *Liatris* species.
- note- fields and young regeneration plots are best for grass response and *Asimina* response. Marked 10 *Aristida* plants at site 3.

**Site 4** - junction of Island and Chimney Rds.

**Site 5** - unburned area across from site 3? collected

**Site 6** - burned *Aristida* area on left side of road, new regeneration area burned nothing collected, good contrast between burned and unburned areas on either side of the road. lots of *Andropogon* down the road.

**Site 7** - wet area good for spring?

**Site 8** - wiregrass, mixed in with *Andropogon glomeratus* all over in mechanically bedded areas, too disturbed for lots of wiregrass but *A. rhizomophora* present and flowering.

**Site 9** - little bluestem on right going into really wet area, check this area in spring.

**Site 10** - at corner of Barnard and Chimney Rds, lots of *A. glomeratus*, some *Aristida* on east side of road, *A. rhizomophora* also present.

**Site 11** - not burned on south side of road, heavy *Andropogon* on north side of road.

**Site 12** - good diversity, marked 10 *A. rhizomophora* plants

**Site 13** - stopped before puddles, very wet area, burned?

**Site 14** - boggy area along BarnaRd where fire stopped into wet area.

**Site 15** - burned area entered near corner of Barnard and Island and north, no *Aristida rhizomophora*, collected *A. beyrichiana*, lots of *Andropogon*.

### **10/31/98 - Lake George State Forest, North Unit**

**Site 16** - stopped at entrance in nice rx burn flatwoods, good condition, nice diversity. Little bluestem flowering, no *Aristidas* flowering, did this burn in the '98 fires? At fork took right to head towards *Nemastylis floridana* area and Hwy 17

**Site 17** - Powerline Rd and entrance, salvage desert at fire area. Recently cleared east of Powerline Rd, not much coming up, some palmetto, *Lachnanthes*? West end of fire in hardwood dominated area, loggers created ponds and lakes from salvaging operations, no plants at all, moonscape. Check out next spring.

**Site 18** - gopher tortoise in road.

**Site 19** - along Brett Rd. North end of fire, salvaged lots of *Asiminas* and some wiregrass, mechanically disturbed.

**Site 20** - unusual *Liatris* along burn edge. Orange flagging on left to mark spot.

**Site 21** - went down Shotwell Rd, no fire, can't find big fire in this area.

**Site 22** - *Nemastylis floridana* first site (10/29/98) is 0.5 miles north of County Rd 3, and south of Hwy 305. - Hwy 17 site notes: 35 plants at northern most pink flagging, 8 plants at second flagging farther south (10 feet) and 7 plants at third flagging farther south (20 feet). I walked to ditch area down the road to find more plants but could not find anymore. Wet area of sites contain *Dichromena*, *Paspalum*, *Coreopsis*, *Mikania*, *Panicum*, sedges, sugar cane plume grass. There are 3 plants about 15 feet south of ditch along the fire's north boundary. Walked east side of road, found no plants.

### **10/31/98 - Heart Island Conservation Area**

**Site 23** - went to southwest end of Heart Island CA, completely salvaged, loggers were just finishing up, hot fire, met loggers, almost finished with job.

### **11/1/98 - Lake George State Forest, Dexter Unit**

**Site 1** - Green Rd and Fawn Lakes Rd, on north side of Green Rd. Upland pine savanna/ sandy area. Collected little bluestem and an *Aristida* (*A. rhizomophora*?). burned in summer '98? Low intensity burn? Good area for rxburn.

**Site 2** - salvage area of burn, it is hard to say what was intense and what was not due to the salvage.

**Site 3** - Jim's Rd and Green Rd. Salvage completely to the west, standing dead along Jim's Rd will be salvaged, along green on east side - not salvaged yet.

**Site 4** - next road intersection, no name, along Green Rd from Jim's Rd to end, heavy burn areas on both sides of road with no salvaging yet.

**Site 5** - end of Green Rd before intensely burned hammock. Very good representation of fire in hammock with palms, oaks and pines completely burned over. Not salvaged at all yet.

**Site 6** - Truck Trail Rd #7 (Truck Trail Rd) and Green Rd. Low intensity burn, also site one, *LiliumCatesbaei*, *Aristida rhizomophora*, *Aristida beyrichiana*

**Site 7** - salvaged area along Truck Trail Rd, no arisitida, salvage desert.

**Site 8** - heavy salvage on south side of Truck Trail Rd, marked timber on right, fire ran through this area, heavy in some sites, heavy bedding in pine plantations.

**Site 9** - took a closed road north along Truck Trail Rd.

**Site 10** - good young stand of burned slash pine with good understory, check in spring, *Ctenium*, *LiliumCatesbaei*,

**Site 11** - Truck Trail Rd and Marsh Rd, all along west side of road is older slash pine that had low intensity burn with previous rxfire history, grasses flowering on east side of road, thinned salvage areas and salvaged heavy in burn area, down Marsh Rd a little ways, on east is unsalvaged older slash pine stand with low-medium intensity burn.

**Site 12** - about 0.4 miles from Marsh Rd and Truck Trail Rd along Truck Trail Rd, just before ditch and new culvert (where culvert burned), salvaged on south side of Rd, low intensity burn to north.

**Site 13** - young slash pine on either side of Rd burned, not salvaged yet, just past culvert that burned. Mapped 10 plants on south and 10 plants on north of *Aristida rhizomophora*. Good grass diversity at site 13, site 13 is 1.3 miles east of Rd 4 and 0.5 miles west from Marsh Rd.

**Site 14** - collected weird composite and an *Aster*, site 14 is 0.7 miles from the Zone B/C sign.

**Site 15** - is 0.5 miles from the Zone B/C sign. Wet area near ditch, *Aristida* flowering

**Site 16** - 0.3 miles from the Zone B/C sign. Wet, salvaged area on north and burned unsalvaged area on south side of Rd.

**Site 17** - 0.1 miles west of Zone B/C sign, between that sign and Rd 4 on south side of Truck Trail Rd. *Sarracenia minor*, *Ctenium*, wet! Nice site.

**Site 18** - no burn west of Rd 4, 0.6 miles from Zone B/C line old *Ctenium* stalks found.

**Site 19** - older pine stand (longleaf?), low intensity fire, *Aristida* / bluestem city. NICE! Probably rxburn frequently. Good area for forest structure studies. 10 *Aristida rhizomophora* plants marked at this site. Near Zone A/B sign along Truck Trail Rd.

**Site 20** - grass city! Area marked for timber sales. Longleaf pine here for sure. Nice area! 0.9 miles east of Rd 2 along Truck Trail Rd.

**Site 21** - wet area, 0.4 miles from Rd east along truck, *Sagittaria*.

**Site 22** - 0.1 mile east of Rd 2 along Truck Trail Rd. *Aristida* flowering, young slash pine stand diverse on both sides of road.

**Site 23** - Truck Trail Rd and Rd 2, fire on both sides of road, wet mechanically disturbed area.

**Site 24** - along River Rd, south end of Truck Trail Rd, *Dichromena*, hardwood hammock area

**Site 25** - more *Dichromena*, possible pitcher plant area

**Site 26** - *Nemastylis floridana* along Shell Rd, near in-holding. Found it as I was driving to in-holding and waiting for gate to open, looked down to the right and there it was flowering. Way cool!

### **11/2/98 - Lake George State Forest, North Unit**

**Site 1** - at corner where Denver Rd turns east/ southeast where fire was low intensity, not salvaged yet but marked for logging, not burned in '98 fires, but rx in December of '97 or spring '98?, good *Aristida*, but no *A. rhizomophora*, possible stand for forest structure studies.

**Site 2** - young pine plantation burned, no grasses, heavy mechanical disturbance, heavy mortality of pines, good next spring? Heavy mechanical. Fox squirrel!

**Site 3** - no evidence of fire here where is eAster fire?

**Site 4** - good scrub area, check for scrub species next spring.

**Site 5** - older stand burned a year ago last summer, collected *Aristida rhizomophora*. Dead stems

**Site 6** - small area burned and salvaged, check for plants next spring.

**Site 7** - sand pine area cleared on both sides of road, check for plants next spring.

**Site 8** - salvaged both sides of road, ferns, palmettos, gallberry starting to come back. Some *Aristida* flowering but small plants.

**Site 9** - gully Rd, salvaged on both sides of road, moonscape.

-notes- need soils and timber areas, and elevations for each fire, end of fire.

**Site 10** - wet area along Truck Trail Rd #2 (Truck Trail Rd), wetland plants collected.

**Site 11** - at Truck Trail Rds 1 and 2. Timber salvage everywhere. Center of fire, nothing left but wetlands.

**Site 13** - Scrub Rd and Truck Trail Rd 1, salvaged area, logged all the way to the wetland edge.

- notes - Lake George North Unit, very sandy roads, hard to get around in.

**Site 14** - good burned scrub, *Aristida beyrichiana* flowering.

**Site 15** - new road off to left and Truck Trail Rd 1 past (east), scrub active logging, slash pine area burned, mid-age 20-30 years old, some variety in amount of mortality.

### **11/2/98 - Haw Creek Conservation Area**

- note- couldn't find fire at conservation area, there is an area near cattle field that burned a while ago, but no evidence of recent burn. Collected two plants at area where fire supposed to be.

#### **11/2/98 - Haw Creek State Preserve**

*Site 1* - near Russell Landing, one mile south of CR110 along CR2007 towards park entrance. Collected weird plants. One plant of *Nemastylis floridana* found along roadside next to palm tree.

#### **11/2/98 - Bull Creek Fish Camp**

*Site 1* - at end of Rd 2006, weird plantain and *Aster* thing in ditch along road.

#### **11/3/98 - Tosahatchee State Reserve**

*Site 1* - found *Nemastylis floridana* along Fish Hole Rd, in burned cabbage palm/pine hammock area. Burned this spring with rx fire? *Nemastylis floridana* in about 8-10 areas with over 100 plants along road. Also along Powerline Rd in same cabbage palm hammock, many plants can be seen from the Powerline Rd on the edge of the cabbage palm hammock, all along Powerline Rd but on the inside of the hammock.

*Site 2* - specific area is marked with flagging. 1.5 miles east along Powerline Rd from Shell Rd. Has anyone ever found it in unburned cabbage palm hammock south of the Powerline Rd from main road?

*Site 3* - great open area, but need longleaf. Burned this past spring? Good grasses!

*Site 4* - along main road, burned summer '97, lots of *Nemastylis floridana* (holding with Jean Huffman's theory about flowering en masse one year after burn). *Nemastylis floridana* city, over 100 plants in this area alone, *Ctenium* and wiregrass present but not flowering.

*Site 5* - along Long Bluff Rd, took left on old road from junction of Fish Hole and long bluff. Road is short cut across corner of junction. Collected plants, saw *Utricularia* in small seep, dicromena, and good ferns! Wet cabbage palm forest, *Nemastylis floridana* flowering.

*Site 6* - north along Fish Hole Rd, cabbage palm and pine area with wiregrass, *Liatris* and sunflowers, *Nemastylis floridana* flowering. This site is 3.7 miles from Beehead Rd and Fish Hole Rds.

#### **11/4/98 - Tosahatchee State Reserve**

*Site 1* - along Fish Hole Rd, *Ctenium*, grassy flatwoods, wiregrass flowering, many species of grasses and sedges. 0.5 miles north along Fish Hole Rd from Rd 4D that splits off to the southwest.

*Site 2* - 6?

*Site 7* - along Fish Hole Rd, wet flatwoods in fire area, 2.6 miles from Beehead Rd, *Nemastylis floridana* flowering

*Site 8* - nice wiregrass flatwoods, collected *Ctenium*, 3.4 miles from Beehead Rd.

*Site 9* - Powerline Rd and St. Nicholas Rd, grassy area on south side of Powerline Rd, full of bluestem and wiregrass, one new species of *Aristida* - but not *A. rhizomophora*.

*Site 10* - along Powerline Rd from St. Nicholas Rd west, grassy area to north, no *Lilium* seen flowering, many flowers of *Nemastylis floridana* along palm forest edge. *Lycopodium*, *Lachnocaulon*, good bog species in wet area along Powerline Rd here.

#### **11/4/98 - Hal Scott Conservation Area**

*Site 1* - 1.4 miles south of junction of Rd 50 and Rd 520, salvage area, good for *Deeringothamnus* next year!, clear cut, private land? Good area if not replanted in the spring with bedding. Access into gate opening, collected plants, good longleaf pine in area, should plant with longleaf pine.

#### **11/5/98 - Tosahatchee State Reserve**

*Site 1* - went around with Shane, the biologist, to see *Panicum abyssum* patch on west end of preserve, made copies of plant records, blown around all day by winds of hurricane Mitch with lots of rain.

#### **11/5/98 - Buck Lake Conservation Area**

*Site 1* - stopped at south end of fire along Powerline Rd in wiregrass area, no salvage. Pine/palmetto hammock.

*Site 2* - turned right at fork in road. Collected plants here, cabbage palm/pine hammock, no *Nemastylis floridana*.

*Site 3* - right fork in road 0.1 mile from site 2, good wiregrass flatwood area. Lots of palmetto and grasses.

*Site 4* - took right fork after site 2 and followed it around into open savanna area. Great grasses and bog species. Nothing unusual seen but collected.

*Site 5* - further down the road in open area near pond pine heavy mortality.

*Site 6* - along same road, took left for not really sure where I am but it is a beautiful, grassy open savanna.

**Site 7** - back at parking lot, *Nemastylis floridana* on Powerline Rd in cabbage palm hammock 0.1 mile south of parking lot.

-note- look at response in cabbage palm hammocks, this fall survey focused on savannas and flatwood areas, but don't forget wetlands!

#### **11/11/98 - Lake George State Forest, Dexter Unit**

**Site 27** - Lemon Rd and Fawn Rd, this is the north west corner of the fire and has not been logged yet, the fire crossed Lemon Rd, this fire may be a rxburn from previous winter. Check on it.

**Site 28** - Lemon Rd and Trail Rd, much disturbance to ground cover due to previous bedding and planting practices. I think this did burn this year but no wiregrass present in area.

**Site 29** - Quarters Rd and Price Rd, in Center of fire area, some salvage has occurred, good wiregrass area to the north along Price Rd and the east along Quarters Rd and to the south after clear-cuts along Price Rd, wiregrass flowering.

**Site 30** - longleaf regen planting area next spring that Kathy Lowenstein asked me to check out. A *rhizomophora*, *A. beyrichiana*, *Andropogon* species, pawpaw site, others? Need history of site, plants collected.

**Site 31** - good area if not logged, little bluestem, wiregrasses, indian grass, yellow *Andropogon* type, many clumps of *Aristida*, with *A. rhizomophora*

**Site 32** -along Price Rd, uncut, fire on both sides of Rd, pretty undisturbed areas,

**Site 33** -just past small drain and turn in road, young slash pine stand, very heavy burned on right, good fuel reduction!

**Site 34** -Rd 4 and Price Rd, active logging along Rd 4 south of price, good fuel reduction and young stand, need to come back to in spring!

**Site 35** -south a little further along Rd 4, is there an in-holding to the west? It is flagged and has a fence around it.

**Site 36** -along Price Rd to Pasture Rd, just past Rd 4? (Not sure), good grassy area on south side of pasture area, muhly, no *A. rhizomophora*, *Ctenium* and *Panicum* present.

**Site 37** -north along road east of pasture, gets into uncut timber that was burned over, pretty high intensity burn, little good understory, mechanical disturbance

**Site 38** - *A. rhizomophora* along side of Quarters Rd just south of Price Rd where the road turns.

**Site 39** - *A. rhizomophora* in thinned areas along Quarters Rd to the west and in juvenile stand to the east. Many flowering plants

-notes- counted flowering stems of *A. rhizomophora* at site 13, north side population:

1. 43

2. 23

3.26

4.26(3 clumps all considered one plant)

5. 42

6. 23 (only northern most clump)

7. 20

8. 12( clump nearest flag)

9. 43

10. 15

south side population:

1. 52

2. 26(2 clumps)

3. 52

4. 38

5. 69

6. 60

7. 59

8. 56

9. 18

10. 12

flowering plants at site 19:

1. 25

2. 5 (one clump only)

3. 2

4. 11
5. 12
6. 5 (one clump only)
7. 8(one clump only)
8. 8 (one clump)
9. 10 (2 clumps)
10. 32

**Site 40** -burned over pine/cabbage palm areas 0.15 miles west of Zone A/B sign

**Site 41** - at the B/C Zone sign along Truck Trail Rd on south side of road just west of sign about 0.05 miles in pine cabbage palm area that burned is a small clump of pitcher plant with flowers about 100 feet off the road,

**Site 42** -Marsh Rd and Truck Trail Rd on south side of road is green burned over stand, might be good for forest structure studies.

**Site 43** -end of Marsh Rd at pine /cabbage palm hammock, it did not burn here and south of this point, but logged from Jim s Rd to here on east side of Marsh Rd.

**Site 44** -pine cabbage palm logged along Jim s Rd to 44, had to turn around because of logging activities (equipment left in middle of road)

**Site 45** -end of green s Rd to cabbage palm hammock, no *Nemastylis floridana* why?

**Site 46** -Shell Rd at junction with Powerline Rd to south before point about 0.2 miles.

**Site 47** -north along Rd 2, good stand, dead timber on either side of the road, *Aristida rhizomophora*, completely blackened, young slash pine stand.

**Site 48** -along Rd 2, north, did longleaf planted area get burned over?

**Site 49** -young longleaf pine and slash pine area north of dove fields burned. *A. rhizomophora* found here.

#### 11/11/98 - Heart Island Conservation Area

-notes- flowering stem count for populations:

Site 3 population:

1. 2
2. 71
3. 14
4. 16
5. 56
6. 11
7. 69
8. 102
9. 104(closest clump to stake)
10. 208 (big daddy o)

site 4 population:

1. 167
2. 255
3. 128
4. 125
5. 225
6. 164
7. 228
8. 64
9. 111
10. 152

#### 11/12/98 - Tiger Bay State Forest, Rima Ridge Unit

-**Site 1** - junction of Rima Ridge Rd and Kiosk off 40 first fire area to east, collected weird *Liatris*, plus flowering pawpaw, *Tradescantia* thing (*Cuthbertia*), *Aristida rhizomophora* A., *Beyrichiana*, good area for longleaf regeneration, sandhill area, indiagrass along road in non-burned area about 0.2 miles down from site one.

**Site 2** - next fire area, 0.5 miles from site 1, small area close to road, longleaf pine area with survival from fire, collected *Cuthbertia ornata*?, good sandhill, why chopped?

**Site 3** - 0.1 miles from site 2, at side road to east, is the Tram Rd?. Yes. More burned area here.

**Site 4** - high fire intensity in this area with oak kill, 0.1 miles from site 3.

**Site 5** - 0.2 miles from site 4, fire on both sides of road along edge of west heading south on Rima Ridge Rd.

**Site 6** - 0.1 miles from site 5, live oak hammock, burned on west side.

**Site 7** - 0.2 miles from site 6, wet area, slash pine area burned over.

**Site 8** - 0.3 miles from site 7, pine savanna, nice grassy area on east side of road, soil disturbance? Fire begins on west side.

**Site 9** - 0.2 miles from site 8, slash pine plantation burned on east side, young plantation on west fire on both sides of road, 10 *Aristida rhizomophora* plants marked.

Flowering stem count:

1. 17

2. 29

3. 28

4. 60

5. 36

6. 20

7. 61

8. 73

9. 27

10. 16

**Site 10** - 0.4 miles from site 9, there is a substation on the west side of road and a road off to the east. There is fire in sand pine area on west, unburned on right, *Aristida* flowering all over here, young slash pine stand here, sand pine also on east side.

**Site 11** - 0.2 miles from site 10, logged slash pine area on west and east, *Aristida rhizomophora* everywhere on both sides of road, coming back in logged areas, clear cuts.

**Site 12** - 0.5 miles from site 11, Danny Hole Rd and Rima Ridge Rd, Danny Hole Rd is farther south than what is shown on the map, need to drive down this road next time, longleaf pine are on south of Danny Hole Rd, good *Aristida rhizomophora* all over flowering.

**Site 13** - 0.1 miles from site 12, survived young slash pine stand on both sides of road, but burned in fire, higher survival, lots of bracken fern dominated area, less wiregrass here, saw palmetto present, abundant. -note- about IR MAP, burned continuously between sites 12 and 13, but lower intensity.

**Site 14** - 0.1 miles from site 13, burned young stand? Some wiregrass present, this fire was very cool, did it burn at all?

**Site 15** - 0.1 miles from Site 14 - wet area, burned over, interesting area, high diversity.

**Site 16** - 0.1 miles from site 15, wet area, cypress swamp, burned on west, less intense area here on west and east sides.

**Site 17** - 0.1 miles from site 16, young pine slash/longleaf plantation burned, good grasses, collected *Aristida rhizomophora*, good *Andropogon*?

**Site 18** - 0.2 miles from site 17, just after curve in road, grassy flatwoods area, nice diversity, very open, mature slash pine area east, cypress dome on west, had fire in it, burned over young slash pine area on west farther south, logged area on east farther south, *Aristida rhizomophora* flowering on west.

**Site 19** - 0.1 miles from site 18, low intensity burn of young slash pine on west, logged on east.

**Site 20** - 0.2 miles from site 19, area burned in young slash pine on west and in more mature forest on east side, lots of grasses flowering including *Aristida rhizomophora*, lots of little bluestem, and *Andropogons*, collected.

**Site 21** - 0.1 miles from site 20, clear cut on east, high soil disturbance, young slash pine area.

**Site 22** - 0.1 miles from site 21, west of young pine plantation is large area of dead timber, cypress area to south and wetland area to east.

**Site 23** - 0.2 miles from site 22, cypress stringer runs along west side of road behind young burned slash pine stand, *Cuthbertia* present and flowering.

**Site 24** - 0.3 miles from site 23, area burned on east and west sides of road, oak area to slash pine area on east and young pine on west, lots of *Aristida* and little bluestem and grasses flowering and *Chrysopsis* and *Solidago*.

**Site 25** - 0.2 miles from site 24, high intensity burn in older slash? pine stand on west, if there is longleaf pine on west, need to check to see if it will make it, there is a closed road at this junction, check this area in spring.

**Site 26** - 0.1 mile from site 25, bend in road, yellow gate just south of area, on west - burned over, wet baygall area, slightly burned area to the east - wet area, gopher tortoise!

**Site 27** - 0.4 miles from site 26, burned forest on each side, but not completely destroyed, slash pine and bracken dominated areas, not a lot of wiregrass.

**Site 28** - 0.3 miles from site 27, unburned forest on both sides of road.

**Site 29** - 0.3 miles from site 28, there is a road to the east to a house.

**Site 30** - 0.2 miles from site 29, wiregrass is flowering in low intensity burned area to west just south of road to house on east.

**Site 31** - 0.4 miles from site 30, at Indian Lake Rd, road turns east.

**Site 32** - gate 0.6 miles from site 31.

**Site 33** - along Danny Hole Rd, good grassy flatwoods at junction of Danny hole and Rima Ridge Rds, with *Aristida* flowering and standing timber, more *Aristida rhizomophora* here than *A. beyrichiana* on both sides of road.

**Site 34** - 0.1 miles from site 33, junction of two roads, took a right.

**Site 35** - 0.1 miles from site 34, stayed straight on main road, fire burned through but didn't kill timber, area to the south is logged where there was killed timber.

**Site 36** - 0.1 miles from site 35, clear cut to south, unburned to north, on north- baygall area.

**Site 37** - 0.3 miles from site 36, unburned area to north, burned over area, wet area to south, logged to south, some longleaf pine left, low intensity slash pine plantation burn to north, road turns to south 0.1 miles and splits, took left fork, around west end of logged area, new logged area.

**Site 38** - 0.3 miles from site 37, on edge of logged area to east, on west very little burn from site 37 to site 38, now burned on both sides of road again at site 38, young slash pine to west and logged to east, wet area, no wiregrass flowering here.

**Site 39** - 0.2 miles from site 38, junction of two roads, took left fork, lots of burned wetland areas.

**Site 40** - 0.2 miles from site 39, after swamp area, which caught heavy burn is nice open savanna with wiregrass flowering, heavy mortality to the north and lower mortality to the south, nice area, *Aristida rhizomophora* flowering.

**Site 41** - 0.1 miles from site 40, nice area, grassy flatwood to south, some survival to north, high mortality, what will they do here? Check in spring. *Aristida rhizomophora* here.

**Site 42** - 0.1 mile from site 41, junction of two roads, stayed straight,

**Site 43** - 0.1 mile from site 42, big death on south/west end of road and on north side, some wiregrass present.

**Site 44** - 0.2 miles from site 43, logged area into some of the burned over plantations, death on both sides of road, not very grassy, some wiregrass present.

**Site 45** - 0.2 miles from site 44, more burned area to the north and to the south, no logging here, mostly slash pine with palmettos and some wiregrass, small areas of sand pine to the south.

**Site 46** - 0.2 miles from site 45, slash pine plantation with palmettos, burned over on both sides of road, *Aristida* here in places, flowering and *Andropogons*, *Aristida rhizomophora* here.

**Site 47** - 0.2 miles from site 46, still young slash pine stand burned on both sides of road, good wiregrass and other grasses.

**Site 48** - 0.2 miles from site 47, road splits off, took left fork, logged area to the south, grassy flatwoods to the north, *Aristida rhizomophora* present and flowering.

**Site 49** - 0.1 miles from site 48, end gate to property, road runs along west edge of logged area then to gate, some longleaf pine left on area, logged to the west side of road, nice longleaf pine, not old, but good to leave! Could be seed source for natural regeneration stands , doves on main road on way back.

**Site 50** - at site 10 went down road to west after substation.

**Site 51** - 0.1 miles from site 50, burned up young slash pine stand to north and south, lots of *Aristida rhizomophora*, *Andropogon* and other grasses and palmetto.

**Site 52** - 0.1 miles from site 51, sugar cane plume grass and tall *Paspalum* collected on side of road, still in pine plantation.

**Site 53** - 0.3 miles from site 52, is this area partitioned out for subdivisions? At end of road with substation, to the south is great *Aristida* area with some slash survival.

**Site 54** - 0.8 miles from site 53, along road east from Rima Ridge Rd at site 10, cabbage palm hammock with pines logged out, stopped at fern in palm tree and found *Nemastylis floridana* flowering in burned area. 0.4 mile from main road.

#### **11/14/98 - Osceola National Forest**

**Site 1** - junction of S-250 and Rd 233, newly burned area to the east and summer burned area to the west, mostly palmetto, but some grasses/ wiregrass in the ground cover (*A. Beyrichiana*), few flowering stalks per plant, 1-5 stems per plant.

-notes- look at adjacent sites to see if rx burn held fire? Look at stand history of adjacent stands.

**Site 2** - 0.6 miles from site 1, still hot rx burn on east and summer fire on west, lots of survival on west, low fuels, stand history?

**Site 3** - 0.4 miles from site 2, young stand burned to the east? Collected the wet arisitida species here.

**Site 4** - 0.6 miles from site 3, took Rd 233 at split of 233 and 211, this is highly mechanically disturbed to the soil, palmetto dominated and very little wiregrass present, marked for logging.

-notes- foresters should have waited a year to determine which trees will survive fire in longleaf pine areas

1. Find marked stands, 2. Resurvey for mortality, 3. Determine percent survived by species, probably would take just a few days to do, tree analysis, yellow marked trees:

1. Dead (D)

2. D

3. Live (L)

4. D

5. D

6. D

7. D

8. L

9. D

10. D, very dead, nice large tree

11. L

12. D

13. L

14. L

15. L

16. D

17. D

18. D

19. D

20. D

21. D

22. D

23. D

24. D

25. L

26. D

27. D

28. L

29. D

30. L

- approximately 30 percent still survived but marked for timber sales.

**Site 5** -junction of Rd 233 and 232, lots of burned fuel, wet area with palmettos, kinda mixed on east side, young plantation burned and longleaf pine stand, wet, on west, high mortality but some survival.

**Site 6** - 0.2 miles from site 5, along Rd 232, very little grasses present, too high soil disturbance? Collected some grasses, burned area to the east, not to the west.

**Site 7** - 0.3 miles from site 6 , young regeneration area checked for wiregrass, so much soil disturbance that only *A. glomeratus* present, trashed ground cover.

**Site 8** - 0.8 miles from site 7, bedded, burned plantation, icky ground cover

**Site 9** - 0.6 miles from site 8, marked longleaf pine area, high survivorship, good longleaf pine area should not be cut over, good area to do survival study, probably only 2-5 trees per 30 trees that are really dead.

**Site 10** - 0.2 miles from site 9, heavy mortality here to longleaf, this area probably good to cut

**Site 11** - 0.6 miles from site 10, wiregrass on the east of road flowering, young plantation on west side of road with disturbance grasses, wiregrass in stand to the west, *A. beyrichiana* only, there are so few wiregrass clumps on this forest that you can count everyone!

**Site 12** - 0.7-0.9 miles from site 11, past wetland area that burned over, pine and cypress depression, no palm trees.

**Site 13** - 0.3 miles from site 12, Rds 232 and 262, burned pine plantation, heavy soil disturbance

**Site 14** - 0.2 miles from site 13, along Rd 262, heavy soil disturbance in burned over pine plantation on both sides of road, south side grading into really wet areas.

**Site 15** - 0.2 miles from site 14 east edge of cypress-tupelo swamp, very wet, no palm trees, looking for *Nemastylis floridana* but can't see any, parts burned through but fire stopped here in places.

**Site 16** - 0.2 miles from site 15, no *Nemastylis floridana*, road off to south to young pine plantation, still surrounded by cypress-tupelo swamp.

**Site 17** - 0.4 miles from site 16, more cypress-tupelo swamp, less soil disturbance.

**Site 18** - 0.4 miles from site 17, back into pine palmetto area to the north, and to the south.

**Site 19** - 0.5 miles from site 18, more burned cypress-tupelo swamp on south and unburned to north, still no *Nemastylis floridana*, no palm trees, just palmettos.

**Site 20** - 0.5 miles from site 19, more upland pine plantation, unburned on north, burned on south.

**Site 21** - 0.7 miles from site 20, Rds 234 and 262, on west edge of cypress swamp, and pine plantation on west side of road.

**Site 22** - 0.2 miles from site 21, south along 234, good wiregrass finally, some large clumps present, regeneration areas where wiregrass is.

**Site 23** - 0.2 miles from site 22, regeneration area, good *Andropogons* and other grasses, not a lot of wiregrass.

**Site 24** - 0.1 mile from site 23, pine plantation, palmetto on west and east sides of road.

**Site 25** - 0.2 miles from site 24, another group of marked trees with high survival!

**Site 26** - 0.1 miles from site 25, good longleaf pine area with good grass recovery, good large wiregrass clumps.

**Site 27** - 0.2 miles from site 26, great grassy area on west side of road and pretty good site to the east, excellent wiregrass site, some studies and experimental plots here, nice area.

**Site 28** - 0.2 miles from site 27, small creek/pond/barrow pit on east side of road, small population of *Sarracenia minor* (3 plants!).

**Site 29** - 0.3 miles from site 28, good longleaf pine savanna on both sides of road, palmetto dominated with some grasses, mostly bluestems and *Panicum anceps* looking thing.

**Site 30** - 0.6 miles from site 29, heavy soil disturbance again in bedded pine plantations

**Site 31** - 0.1 miles from site 30, marked very dead longleaf pines on east side of road but high survival on west side of road.

**Site 32** - 0.4 miles from site 31, dead young plantation to the west, very little wiregrass, older burned stand to the east with some wiregrass and *Panicum* species

**Site 33** - 0.1 miles from site 32, Rds 234 and 233 turned south.

**Site 34** - 0.4 miles from site 33, checked for *Gymnopogon chapmanianus*, not found.

**Site 35** - 0.4 miles from site 34, checked for *G. chapmanianus* and did not find.

**Site 36** - 0.3 miles from site 35, walked area to find *G. chapmanianus* but could not find.

**Site 37** - 0.1 miles from site 36, checked again for *Gymnopogon* but could not find it, good longleaf pine area, checked survival on marked trees to the south, lots of Red-cockaded Woodpecker trees here.

**Site 38** - 0.3 miles from site 37, grassy longleaf pine area, checked for *Gymnopogon*, but couldn't find any.

**Site 39** - 0.5 miles from site 38, no *Gymnopogon*, fire intensity low if at all here.

**Site 40** - 2.0 miles from site 39, south along 236, found about 20-25 plants of *Ctenium floridanum* along the forest edge, they flowered much earlier, possibly in September? Good population of it in burned area, 1.0 miles to Rd 233 north, 1 mile south of Rds 233 and 236.

**Site 41** - 1.4 miles from site 40, end good longleaf pine area (from site 40 to here is good longleaf pine area).

**Site 42** - 0.3 miles from site 41, good longleaf pine area again, some wiregrass, *Andropogon* and *Schizachyrium*.

**Site 43** - junction 263 and 236, pipeline on south with grasses flowering, kept on Rd 236.

**Site 44** - good wiregrass area along Hwy at 250 and 250-A, *Ctenium floridanum* site, good area to come back to in the spring.

**Site 45** - Hartwrightia site as written in FNAI description. Probably not flowering, probably past flowering, pond cypress-tupelo area is 3.5 miles from Ocean Pond Rd (250-A), check this area next spring, also cypress-tupelo areas.

#### **11/15/98 - Bayard Point Conservation Area**

Met John at check station, got maps and talked about access, decided to go to south end first and approach that way on Crowl Rd.

**Site 1** - gate at Crowl Rd, xeric sandhill habitat.

**Site 2** - 0.1 miles from site 1, begin burned area, there is a road off to left, low intensity fire in baygall area, palmetto, bay and pines, all needs more fire!

**Site 3** - 0.1 miles from site 2, begin burn in pine forest area, heavy soil disturbance, no wiregrass, lots of palmettos, low intensity burn here.

**Site 4** - 0.1 miles from site 3, upland pine forest with bracken dominated and palmettos, high survival of pines.

**Site 5** - 0.3 miles from site 4, at east gate of property along Crowl Rd, area on G-P lands completely logged, St. John's property not logged to the west.

**Site 6** - 0.2 miles from site 5, along G-P Rd, heavily logged throughout, high intensity burn  
-note- need to find out how much loss to wood if charred.

**Site 7** - got turned around by hunter and then went back along Crowl Rd. Collected legume (rattle box type) along road.

**Site 8** - 0.1 miles from site 7, this site is the entrance to the road to the north off Crowl Rd. This road is probably the plow line for the fire to the east and there is no burn to the west. It is not a good road to drive along and turn around on, pine/palmetto/bracken area, high fire load, not many grasses.

**Site 9** - 0.1 miles from site 8, same palmetto and pine area, wet here, baygall area, high fuels, good survival.

**Site 10** - 0.2 miles from site 9, baygall collected, gymno-looking grass collected.

**Site 11** - 0.2 miles from site 10, higher xeric area, not burned to plow line, no evidence of fire.

**Site 12** - turned around along road, lots of longleaf pine in canopy, but needs burn.  
-notes- there are probably seepage bogs in this area, check next spring for new seepage bogs in this area, good place for shrub diversity. This is a good place to study organic peat loss, also fire effects on cypress-tupelo swamps.

**Site 13** - 0.2 miles from site 12, xeric sandhill unburned to west and burned pine/palmetto with some wiregrass, little bluestem and *Liatris* species, plow line runs along transition between xeric sandhill and pine/palmetto areas.

**Site 14** - 0.1 miles from site 13, Crowl Rd again.

**Site 15** - 1.5 miles from Site 14 - at corner of Crowl Rd and Hwy 17, Hwy right of way, xeric sandhill, no burn.

**Site 16** - gate at Rd 226 on north end, west of main entrance.

**Site 17** - 0.1 miles from site 16, split in road took right fork, headed south, good xeric sandhill on both east and west sides of road.

**Site 18** - 0.8 miles from site 17, stopped and turned around at wet bay area, this last 0.5 miles has been made into a new plow line for fire and is drawn on map, this is probably what the fuels looked like in the south end of the fire by Crowl Rd.  
- notes- need photo monitoring plots.

**Site 19** - turned around in parking area with stone gravel piles.

**Site 20** - back at gate at parking area check station, talked with John who has 10 kids and 20 grandkids!

**Site 21** - 0.2 miles from check station, road splits, took right fork, main road, plow line to the south, this area on both north and south sides of road are good potential upland longleaf pine habitats with bluestem and wiregrass in understory, not burned

**Site 22** - 1.1 miles from site 21, cross road of main road and fire break that runs north-south, need to take south road but closed right now, good upland longleaf pine area with bog species in ditches along road, area to the east of this junction has been burned previously with rx fire in summer '97?

**Site 23** - 0.3 miles from site 22, boggy area to the north, unburned area

**Site 24** - 0.5 miles from site 23, plowline to the north, definite wet pine savanna country, needs repeated frequent (more frequent) burns.

**Site 25** - 0.3 miles from site 24, found parking area, good longleaf pine site, but unburned, needs burning.

**Site 26** - 0.1 miles from site 25, took southeast fork (right) at junction of fireline and main road.

**Site 27** - 0.4 miles from site 26, followed fire break, fire is on the south side of this road, railroad crossing is ahead about 0.1 miles and a hunting camp is just after that, this line held fire, stayed on main fire break and turned to the north, there is road off to right to cross railroad (illegal entry?)

**Site 28** - 0.2 miles from site 27, fire stopped and jumped plow line here, but not bad, good savanna area, turned around here.

**Site 29** - (same site as 26), the property boundaries are somewhat confusing here, but a fire break here definitely stopped the fire from the north to the south, everything north of this line did not burn, walked fire break but still could not figure out boundaries, fire mostly in wet mesic flatwoods and cypress areas on this south end.

## **SPRING SURVEY 1999**

### **3/7/99 - Lake George State Forest, Dexter Unit**

Walked Marsh Rd after it dead ends to Lake Woodruff NWR boundary. Refuge boundary marked with yellow paint and fireline between Lake George and refuge. Notes - lots of fallen debris in firebreaks, need to remove or replot. Also need to make a checklist for plant surveys.

**Site 13** - At northern boundary of Lake Woodruff NWR. This area is nice hardwood hammock. Some trees have Union Camp markers from previous timber ownership. Walked westerly along boundary of refuge past mature slash pine/palmetto stand. State is well marked along boundary. Yellow with white rings.

**Site 14** - Green Rd and Jim's Rd on northeast side of road is *Pinguicula* and *Drosera* patch in flower. Keyed *Pinguicula* to *P. primuliflora* - common. Tree swallows flying along logged area between Jim's Rd and Truck Trail Rd on Green Rd. Here *Vaccinium* sp. is flowering and purple thing (*Linaria canadensis*?). Also here are *Gelsimium semprevirens*, *Hypericum crux-andreae*, *Drosera brevifolia*, *Hedyotis procumbens*, *Polygala rugelii*, *Vaccinium myrsinites*.

**Site 15** - A special treat! A pair of Sandhill cranes calling on Truck Trail Rd in logged area. I watched for an hour as they foraged in recently logged and burned areas. Photos taken. They were eating insects. I watched as they threw their heads up in the air when I got too close. They hung together, first one always lead and the other smaller followed. They let me get pretty close to them without flying. They danced when they crossed the road. What a treat!

-Jim and Green Rd (all plants seen as above except *Polygala*, *Hypericum* and *Gelsimium*, also found *Viola lanceolata*, *Crotalaria rotundifolia*, *Solidago fistulosa*).

**Site 16** - still in logged area with flags still up in measured Florida three awn plots. *Chrysopsis mariana* along road from site 13, also *Polygala lutea*

**Site 17** - *Sarracenia minor* site, flagged with pink flagging. Also here is *Utricularia juncea*, *Ilex glabra*, *Serenoa repens*, *Sabal palmetto*, *Pinus elliotii*, *Pinus palustris*? , *Erigeron vernua*, *Myrica cerifera*, and *Vaccinium corymbosum*.

### **3/8/99 - Tiger Bay State Forest, Main Unit**

-Left note for Cathy at office, and talked to Misty for over an hour about wildfire experiences during firestorm. Heard fires going on in Bunnell District keeping fire fighters busy. Drove Powerline Rd at entrance gate and found *Ericaulon compressum*, *Cladium jamaicense*, *Pinus elliotii*, *Taxodium ascendens*, *Aster elliotii*, *Viola primulifolia*.

- Rima Ridge Rd, found *Zamia pumila* in oak hammock area along main road.

### **3/9/99 - Tiger Bay State Forest, Main Unit**

-along North Rd, found *Linaria canadensis*, *Lyonia* sp., *Viola palmata* (sensu Wunderland), *Ilex glabra*, *Pinguicula pumila*, *Nymphaea odorata*.

- Rima Ridge Rd north of road block found *Opuntia* sp., and Aloe looking thing (Spanish Bayonet).

### **3/10/99 - Lake Woodruff National Wildlife Refuge, Jones Island**

-checked out iris and determined it to be *I. hexagona* for sure.

### **3/10/99 - Lake George State Forest, Dexter Unit**

- went to Lake George to check out *Pinguiculas* again. On Jim's Rd (171.9 mile marker on vehicle) towards Marsh Rd

- wet area, nice for aquatics. need to check out later, found *Viola lanceolata*, *Viola palmata* (Wunderland) at 172.2.

- Butterwort city at 172.3 on left, many (20-50) plants in large clumps along ditch banks on edge of cabbage palm hammock areas with moss, at least two clumps present. Also clumps along south side of road at 172.4, 172.7 and 172.8. At this last stop found *Sisyrinchium angustifolium* (Wunderland) , purple city with Butterworts, Toad flax and *Sisyrinchium*. At 172.9 I am at original *Pinguicula* site.

### **3/10/99 - Heart Island Conservation Area**

- went to Heart Island. need to check wet area near site 9, there is lot of *Lycopodium* and lilies, there could be other interesting wetland species. Also saw *Polygala rugelii*, *Viola lanceolata*, *Hypericum crux-andreae*. Met up with Larry and Ken who work for SJRWMD.

- on Flat Rd at 192.1, (0.5 miles south of Bullpen Rd on Flat Rd), found *S. minor* on right (east?) side of road just after drain to east and baygall on west side of road. small patch found. at 192.6, Bullpen Rd meets. Turned around.

### **3/11/99 - Bucklake Conservation Area**

- came in west entrance, near entrance found *Iris hexagona* on Powerline Rd right of way, flowering. Also *Lyonia ludia*, *Vaccinium myrsinites*, *Polygala juncaea*, *Polygala rugelii*, *Pinguicula pumila*, *Sabatia grandiflora*. Note - puddles are solid below, but need 4WD to get through.

### **4/7/99 - Ocala National Forest, Hwy 40**

- *Asiminas* are flowering!, at least two species. also see *Leucothoe racemosa*.  
- Drove Hwy 40 west past 314A, took right along Renovation? Lake Trail and photo point, found *Asimina reticulata* flowering and *Leucothoe*, then turned around and headed back east on Hwy 40. At vehicle marker 955.8 found *Zephranthes simpsonii* location which was 0.3 miles from Rd 314A.

### **4/7/99 - Tiger Bay State Forest, Main Unit**

- entered at Brick Rd and Hwy 92 vehicle marker 11.3.  
Site 1 at 11.4 marker along Brick Rd, this area was burned in 1998 wildfires on north side of road, this is a wet pine flatwoods.

### **4/8/99 - Tosahatchee State Reserve**

- found *Deeringothamnus* EO #21 along *Sabal* Palm Rd. Took photos, it is flowering. Way cool plant. It is growing in xeric sandhill with *Lyonia lucida*, *Asimina angustifolia* or *A. parvifolia*, *Ilex glabra*, with lichens on ground, sandy open areas with white sands  
- at Tosahatchee, went to wildfire areas and surveyed for plants. There is much logging along Beehead Rd in prescribed burn area and some logging of 1998 wildfire areas. Need to check on Powerline Rd and higher elevations of reserve for *Deeringothamnus pulchellus*.  
- 165.0 Fish Hole Rds and Bee Head Rds. Here fire on right is a Rx fire from 1998, fire on left is Rx fire from 1999 with low intensity burn. In Rx Fire of 1998, there is no crown scorch in Rx fire of 1999 there is very low kill of surface fuels.  
- 165.5 Old road to right and left, where there is a 20mph speed sign.  
- met up with Shane the biologist on site, he showed me an area he believed to have *Zephranthes*, but none found.  
- 169.5 Beehead Rd and Long Bluff Rd.  
- 169.7 *Sabatia grandiflora*.  
- 170.1 Pawpaw city and road to east, a cut through to Long Bluff Rd?  
- notes: need to check for lily, check for pawpaws in logged areas.

### **4/9/99 - Tosahatchee State Reserve**

**Site 1** - met up with Shane who took me to *Raphidophyllum* site in Hardwood Hammock / Baygall area north of headquarters. Another way cool plant. photos taken.  
**Site 2** - *Zephranthes simpsonii* site along Baygall Rd leading into recently logged areas. The plant was in an area with disturbed soil from logging and road construction. Slightly boggy.  
**Site 3** - drove north along St. Nicholas Rd from Bee line Rd. Here the soil series is #44, Smyrna fine sand. Drove north along road to check for *Deeringothamnus pulchellus*. At horse camp Rd, vehicle marker begins at 367.2.  
- checked area about 0.25-0.5 miles north along Nicholas Rd to check pawpaw on east side of road across from logged and disturbed area.  
**Site 1** - 372.8 marker, Fish hole and Bee line Rds. 2pm see descriptions from yesterday.  
**Site 2** - 372.9, Fish Hole Rd south, '98 Rx fire on right, '99 Rx fire on left. Both pine/palmetto flatwoods. wet.  
**Site 3** - 0.1m south of site 2, same as site 2.  
**Site 4** - 0.1 m south of site 3, same as site 2 and 3. Rx burn is on right, and there is a little more open canopy.  
**Site 5** - 373.2, 0.1 m from site 4, flowering *Iris hexagona* in ditches.  
**Site 6** - 373.3, 0.1 m from site 5, this is an area where old Beehead Rd crosses fishole Rd. Yesterday I walked this site looking for pawpaws and lilies, and found none. Along this road is great open pine savanna with lots of wiregrass, toothache grass, and possibly *Aristida rhizomophora*. did not include this site in rare plant surveys because it was not part of wildfires (although burned in 1998).  
**Site 7** - 0.1m from site 6. same as site 7, need to continue to check for lilies in Rx 99 burned area. The area on right looks like is has not burned in some areas along road.  
**Site 8** - 373.5, 0.1 mile from site 7, same as site 2, '99 rx fire on left, '98 rx fire on right. pine-palmetto area.

**Site 9** - 373.6 same as site 8.

**Site 10** - 373.7 same as site 9, however, thicker underbrush in both '98 and '99 wildfires.

**Site 11** - on north end of wildfire of 1998 and there is a fork in the road. 373.9, 0.2 miles from site 10. not much here alive, but pines and palmetto. hardly anything flowering but *Dichantheleiums* and/or *Panicums*.

**Site 12** - 0.1 mile from site 11, Orchids along Trail in fruit/ past seeded - can't tell species but definitely a form of *Habenaria*? at Trail head along North edge of fire, here some grasses are flowering, there is very little understory and some ferns are sprouting.

**Site 13** - 374. 1, north end of WFI, WFI along north edge is pine -cabbage palm forest. There is also red maple, sawgrass, more pines, small white flowered pepper thing, yellow composite, wiregrass, very wet irises flowering, *Saururus*, and ferns. Fire less intense here and did not burn in really wet areas. ditches are wet. this area is definitely a wetland.

**Site 14** - 374.2 more palm trees, little understory except young palms, smilax, french mulberry, button bush, *Diospyros*, very hot and intense fire area. also found *Eupatorium*, *Pluchea*, lots of open ground, small pines, pokeweed, ferns, fireweed.

**Site 15** - 374.3 same as site 14

**Site 16** - 0.1 m from site 15, more open, grassy area, less intense burn, more vines and cladium, open marshy area, unburned areas as well, too wet?

**Site 17** - open pine- cabbage palm hammock, grassy below with *Spartina bakerii*? or muhly? and composites present, with *Solanum* sp., legume vine flowering (with small flowers), yellow composite. This is another wet area, there are huge fireweed plants, *Eryngium* present, *Scutellaria*, *Sisyrinchium*, lots of vines, and *Sinocio* sp.

**Site 18** - 374.6, very grassy with few palm trees or pines, *Panicum* sp., and most shrubs killed by fire.

**Site 19** - 374.7, similar to site 18.

**Site 20** - 374.8, back to thick dense stand of pines and palm trees. Mostly cabbage palm trees present. Some diversity in overstory with disturbance species below (lots of fireweed).

**Site 21** - 375.0, thick area of fuel, maybe wet, didn't burn thoroughly. Open pine and cabbage palm trees to the south of this area next to road.

**Site 22** - 375.1 open pine and cabbage palm hammock with grassy understory.

**Site 23** - 375. 2, palm forest area mostly. Low intensity burn with little understory and shrubs present grading into a wet area.

**Site 24** - 375.3, end of burn area. beautiful hardwood hammock with cypress trees. Too wet for wildfire to burn into apparently. This is where hand fern can be found. Crossed a small creek between sites 24 and 23. - headed back towards Fish Hole Rd. 375.4. Notes on way back - need to check palms for ferns, 376.0 nice open grassy area with pines, old road at 376.1? also, 376.8 back at gate turned south onto Fish Hole Rd.

**Site 25** - 376.9 south along Fish Hole Rd, pines and cabbage palm trees present with understory dominated by ferns.

**Site 26**- 377.0, pine-cabbage palm hammock, *Linaria* present, heavy pine mortality, high scorch on palm trees. diverse understory present.

**Site 27** - 377.1, pine dominated area with palmetto, new soil type? there is a pine-palm hammock to west.

**Site 28** - 377.2, parking area here, high intensity fire and heavy mortality of pines as far west as one can see, pine flatwoods area here. Plants at this site observed included; *Balduina* sp., *Erigeron* sp., *Chasmanthium* sp., *Sisyrinchium* sp., Orange colored *Polygala (lutea?)*, *Diodia* with white flowers, *Drosera* small - *capillaris*? , *Proserpinaca*, grasses, *Ericaulon*, *Viola lanceolata*. Walked Trail here.

**Site 29** - 377.3, high mortality of pines, lots of palmetto regrowth, some palm trees present. What will this become next? palms are more than 5 feet tall here (will this succeed into cabbage palm hammock?).

**Site 30** - 377.4, pine - palmetto flatwoods, high density of small pines, palmettos dominates understory with some grasses and herbs.

**Site 31** -377.5, at bend in Fish Hole Rd where it begins to turn south. Orange Trail head marker here to enter wilderness Trail. Trail crosses road. To the east there is a fire lane and parking area. This is a pine-palmetto flatwoods with some palm trees.

**Site 32** -377.6, still in areas of high mortality of pines. This area is also a pine-palmetto flatwoods with grass dominated areas and wiregrass occurring. soil types = 20 but haven't been able to see this soil type on ground visually yet. very wet.

**Site 33** -377.7, cabbage palm trees more common here, but dead pine trees dominate areas with palmetto below. Less herbs and native grasses here.

**Site 34** -377.8, very open grassy area, pine dominated with higher survival and longleaf pine surviving! and some slash pine surviving. This could be considered a grassy flatwoods as described by FNAI.

**Site 35** -377.9, very wet site, *Iris hexagona* flowering in large stand, heavy pine mortality, palm trees increasing in numbers it seems, no palmetto here. *Pluchea* present in large patches. There is evidence of hog rooting. Other plants include *Carex* sp., *Circium*, small flowered *Polygala*, and *Balduina*.

**Site 36** -377.95, survey marker in wildfire areas TOSO9, FLDNR, need to get data for marker at FLDNR.

**Site 37** -378.0, just past small creek area wet and diverse area. Plants include *Canna*, *Crotalaria*, Cinnamon Fern, red maple, iris. Beyond wet area is grassy flatwoods and observed *Hypericum* sp., *Saururus*, *Juncus*, *Cyperus*.

**Site 38** -378.05 at sign for Trail head. Wet grassy flatwoods with palmetto and palm trees and pines. Some mortality present. There is a Trail off to the east. Wiregrass is flowering at this site.

**Site 39** -378.1, right before the road turns east. Pine-palmetto with some cabbage palm trees present. some herbaceous diversity present. there is very little grass here.

**Site 40** -378.2, road turned east, same as site 39, silk grass present, will it flower again this year? it flowered last year?

**Site 41** -378.3, similar to site 40, open grassy areas with wiregrass and palmetto. There is more grass than palmetto.

**Site 42** -378.4, at fire lane to southwest of burned area and parking area. Here there is high mortality of pines in a pine-palmetto flatwoods with high amount of palmettos.

**Site 43** -378.5, grassy flatwoods. Found *Spiranthes vernalis* flowering here. also *Stylingia*.

**Site 44** -378.6, this is a pine-palmetto area, some herb diversity present. *Circium* and vines with few grasses.

**Site 45** -pine-palmetto flatwoods, with palmetto below, some grasses, high density of dead pines due to very high intensity fire.

**Site 46** -378.8, similar to site 45, with palms and low herb diversity in the understory.

**Site 47** -378.9, high density of pines and palm trees overall. This area seems wetter than previous areas, with many obligate wetland species such as the *Spartina* thing, wax myrtle, red maple, peat moss, and lots of young palm trees.

**Site 48** -379.0, high density of pines and mature palm trees. Very little understory. It looks like about four inches of organic matter has been burned off by the wildfires. Here there are lots of palm trees. Low diversity in understory.

**Site 49** -379.1, cypress dome and creek, not burned. This is a floodplain forest.

**Site 50** -379.2, many burned pines, mostly palm tree area. Low mortality, lots of young palm trees here. The Trail is marked along the road here.

**Site 51** -379.3, Trail enters palm hammock again. This forest has pines and palm trees. It is a little drier than site 50, and there is little understory present.

**Site 52** -379.4, back to pine palmetto flatwoods with some grassy understory. The road to the east is a cut through to Long Bluff Rd. Notes - need to walk to see if it does cut to Long Bluff Rd, check out pawpaws in flower, more upland areas need to be inventoried, this area was burned in 1998 as a Rxfire. no real evidence of heavy wildfire activity here so turned around and went back. left key in tube as requested at 7pm.

#### **4/10/99 - Tiger Bay State Forest, Main Unit**

**Site 1** - 492.7 vehicle marker, at Hwy 92 and beginning of Brick Rd entrance towards Center Rd. This is a burned over area that has unlogged slash pine and cypress trees.

**Site 2** - 492.8, along Brick Rd to Center Rd from Hwy 92. This area is drier than site 1, fireweed prevalent. poor understory.

**Site 3** - 492.9, wet area.

**Site 4** - 430.0, corner of Center Rd and Brick Rd. Area on left logged to Center Rd. Extensive logging on left side of road with recent cuts and logging activity. Center Rd is eAstern boundary of burned area. There is no burn continuing along Brick Rd past Center Rd.

**Site 5** - 493.1, logged site with cypress dome unlogged within Center of site. wasteland looking, nothing flowering or coming up. some bracken fern. major rutting and heavy soil disturbance at this site, nothing flowering in cypress dome either. *Serenoa* is flowering in logged area. Other plants include *Ilex glabra*, no wiregrass present, sensitive briar, rusty *Lyonia*?, fireweed, *Vitis rotundifolia*, *Gordonia*, *Panicum*, *Dichanthelium* sp., unburned area to the east of Center Rd. Sandhill cranes in this logged area! *Zigadenus* present, also *Polygala ramosa*.

**Site 6** - 493.2, logged area, similar to site 5.

**Site 7** - 493.3, logged area continued. Loading deck at this site, lots of bracken open and cleared mostly, cypress dome with some surviving trees. bracken, *Vitis*, less soil disturbance than site 5, nothing coming up

in cypress dome, one surviving *Gordonia* tree, at least 12 inches of organic matter has been burned off of surface due to wildfires. Some epiphytes growing on dead cypress, cypress that survived are trees with thick bowls (bases of organic matter accumulations) and high (at least on half meter off ground). Where bowls are more than 18 inches above ground then tree would survive. A model could be made to predict fire intensity, amount of peat burn, and cypress survival. *Gnaphalium* present.

**Site 8** - 493.4, very logged and cleared area. bracken and palmetto and composites present. Two species of *Asters* one pubescent and the other glabrous are seen. *Polygala rugelii*, Fireweed, *Ericaulon* present too.

**Site 9** - another logging deck in logged area. old road off to right, need to check out cypress and unburned areas on edge of logged area later.

**Site 10** - 493.6, on edge of logged area with little coming up except on road edge. close to wet area of less intense burn and creek bottom here. pencil flower present.

**Site 11** - 493.7, area of low intensity burn where many pines survived a little wetter area. Pines and palmettos with *Gordonia* and *Ericaulon* species, *Polygala rugelii*, bracken, *Ilex glabra*, *Croton argyanthemus*. ferns, *Vaccinium* sp., *Vitis rotundifolia*, sensitive briar, *Gordonia*, *Gaylussacia*. In logged area behind small unburned area, not much coming back or flowering. Also here are *Gaylussacia frondosa* var. *tomentosa*, *Vaccinium myrsinites*, *Lyonia fruticosa*.

**Site 12** - 493.8, major logging deck here. very little present coming back.

**Site 13** - end of logged area, firebreak stopped fire to north of this site. This is a wet site with lots of *Ericaulon*, coming up and sedges. There is a pine plantation to north, doesn't look like it was burned in the wildfires of '98. possibly cool or lower intensity burn took place. Plants seen include: Small *Sagittaria* thing, *Diodia*, *Drosera*, *Lachnanthes* base leaves, fireweed, *Andropogon* sp., Pitcher plant. This was a bedded pine plantation. The *Drosera* has long raceme of pink flowers. Also saw *Xyris* flowering (1:20p), *Utricularia*, Large patches of *Drosera* again, This was probably an open savanna at one time, it is very boggy, there are ferns in wetter sites, *Polygala lutea*, possibly an orchid area in fall? *Myrica cerifera* present, *Smilax* sp., *Gnaphalium*, *Nyssa sylvatica* var. *biflora*, *Viola lanceolata*.

**Site 14** - 494.0, similar to site 13, low intensity burn areas with some standing live pines and palmettos. Plants include *Polygala*, *Ilex glabra*, *Lyonia*, and fireweed.

**Site 15** - 494.1, logged area cleared on edge of low intensity burn area to north, lots of *Aletris*, *Lachnanthes* coming back in a continuous field, fog fruit and vines, fireweed in open field. In pine area, *Ericaulon*, *Drosera*, *Lachnanthes*, other bog species, *Utricularia*, *Xyris*, cinnamon fern, sphagnum moss, *Proserpinaca*, Pitcher plants, *Andropogon* sp., *Sagittaria*, and *Erigeron* present.

**Site 16** - 494.2, low intensity, if burned at all during 1998. This is a pine-palmetto flatwoods area with thick dense stand of pines. It is a wet area and probably kept fire down.

**Site 17** - 494.3, logged area, some vegetation coming back. Plants include *Lachnanthes*, grasses, palmetto, and *Gordonia*.

**Site 18** - 494.4, Center Rd and Dark Entry Rds, logged areas to left northwest and southwest along Dark Entry Rd and to the northeast on Dark Entry Rd. Directly to the right on Center Rd before Dark Entry Rd is an unburned bayall area. Stayed on Center Rd.

**Site 19** - 494.5, burned and logged area to left, unburned area to right, no new flowering plants in logged area. Palmetto, cinnamon fern, waxmyrtle present. 2 pm sea breeze kicked in!

**Site 20** - 494.6, logged area, poor diversity, nothing new flowering.

**Site 21** - 494.7, just past small wet area with *Hypericum*, scaly bark, *Myrica cerifera*, *Nyssa*, *Gordonia*, Cypress and wet area with bog species here, burned over on both east and west sides of road and logged. Not alot flowering on either side. Pitcher plants on west side of road.

**Site 22** - 494.75, road off to west and huge logged area to east. Wampee Strand Rd.

**Site 23** - 494.8, logged area to west with *Sarracenia minor*, *Lyonia lucida*, *Gordonia* flowering, shrub smells like *Myrica*, *Ilex glabra*, bog species, palmetto, *Polygala rugelii*, *Croton*, *Aster*, *Zigadenus*. On east side of road, *Aster* sp., *Polygala rugelii*, *Croton*, white *Sabatia*, *Polygala lutea*, *Ilex glabra*, *Vitis rotundifolia*, palmetto, *Lyonia*, *Vaccinium myrsinites*, pawpaw. Higher and somewhat drier than west side of road. Also *Gaylussacia*, *Cuthbertia*, *Solidago* sp.

**Site 24** - 494.9, logged on west side, burned over wet flatwoods on east side of road. West side similar to site 23, east side of road burned cypress area with *Balduina*, white lily, *Utricularia*, *Sagittaria*, pond cypress? resprouting after fire. Nothing flowering in cypress dome itself. at last 6-8 inches of organic matter removed by fire. what about relationship between water level and burned peat? stumpy cypress here. yellow composite (*Gaillardia pulchellus*?) *Utricularia* not spurred, boggy species on edge of cypress area. *Polygala cruciata*.

**Site 25** - 495.0, water hole on left with water still in it, flowering white lilies, logged area beyond, *Nyphaeae odorata*, cypress area to the west burned and logged.

**Site 26**- 495.1, burned on both sides of the road, to the east is a logging road, and loading deck with grass (cogon?) growing along road. On west, boggy species present, nice boggy area, fine white sands. Possible orchid area as well. What about the evolution of the pine bark beetles with the fires? On east side *Lachnanthes* abundant. Lots of *Polygala rugelii* and *Panicum*.

**Site 27** - 495.2, logged on west and east sides, drier sites, and lots of *Asters* flowering and *P. rugelii*.

**Site 28** - 495.3, similar to site 27, logged on both sides of road, not a whole lot flowering, fireweed on west side of road.

**Site 29** - 495.4, similar to site 28, lots of *Lachnanthes*, unburned area to east, end of burn on east side. Just before water hole with pitcher plants along road edge of hole, water in hole! great blue heron balancing on branch.

**Site 30** - 495.5 burned cypress area on both sides of road, water moccasin, fireweed on edge of road, *Thelypteris*, *Utricularia inflata*. Photos taken.

**Site 31** -495.6, wet area with water hole burned over on west, unburned to east, boggy area *Ericaulon*, good lily area next fall. wet cypress flatwoods, scattered pitcher plants flowering and sphagnum moss.

**Site 32** -495.7, more cypress area, wet flatwoods, pitchers flowering.

**Site 33** -495.8, water hole and cypress flatwoods beyond, similar to site 32, need to keep checking for plants, lots of pitchers along road edges and water holes in flower.

**Site 34** -495.9, dry area logged on west, unburned on east, fireweed, pretty low diversity, barren.

**Site 35** -496.0, cypress area to west beyond logged area, lots of *Lachnanthes*, not much else.

**Site 36** -496.1, logged site to west unburned to east, not much diversity, ferns, palmetto, fireweed, *Dichantheium* disturbance species.

**Site 37** -496.2, completely logged over, pond pine present, very wet, stumps remain, logging trucks trashed area, no flowering plants coming up. This is a very wet area, not sure of pine that was here either pond or slash.

**Site 38** -496.3, more upland site, drier than site 37, pine flatwoods but drier. Burned and logged. Palmetto and *Andropogon* flowering.

**Site 39** -496.4, drier site and burned with longleaf pine! and *Gordonia* and palmetto below. Need to check plants again here later on, no wiregrass, but gallberry and palmetto. logged site.

**Site 40** -496.5, not logged area with oaks? surviving you stand of pines? five feet tall, most pines killed. *Diospyros*, *P. lutea*, gallberry, *Lyonia fruticosa*, bracken, *Asters*, fireweed, *Andropogon*, *Vitis*, palmetto, *Dichantheium*, disturbance species.

**Site 41** -496.6, Bear Island, North Rd, Center Rd Junction, stopped here, edge of young pine stand that burned with longleaf in it. north end of property.

#### **4/11/99 - Tiger Bay State Forest, Rima Ridge Unit**

Vehicle marker 544.2.

**Site 1** - 545.3, along Indian Lake Rd, *Lyonia* and *Tradescantia* thing, scrub.

**Site 2** - 546.0, check station at Rima Ridge Rd

**Site 3** - 546.3, road off to right (east)

**Site 4** - 546.4, road off to east. Substation to west.

**Site 5** - 546.5, white flowering shrub. Crawled on tree with moccasin below with mouth open

**Site 6** - 546.65 at junction of Indian Lake and Rima Ridge Rd. This is site 31, of fall survey 1998.

**Site 7** - 546.7, swamp to east looks like it was burned in wildfires '98 cypress killed but *Gordonia* coming back. Area to west also burned in '98 wildfires, but cool burn because sand pine still living along road edge. West burn very spotty to the east is young pines (slash) not burned?

**Site 8** - 546.8, burned to west with some mortality of sand pine. Unburned slash pine stand to east.

**Site 9** - 546.9 unburned on both sides of road.

**Site 10** - 547.0, unburned on both sides, still young pine plantation to east and scrub on west.

**Site 11** - 547.1, road to east leading to house and tower, young slash stand on west, with wiregrass flowering but unkilld slash, rx burn?

**Site 12** - 547.2, unburned slash pine stands on both sides of road.

**Site 13** - 547.3, young unburned plantation to east and west, *Stillingia*, pawpaw, palmetto, disturbance species.

**Site 14** - 547.4, site 28 in fall survey of 1998. Unburned areas of slash pine strands on both sides of road, two roads come off Rima Ridge Rd, one to east and one to west, Scrogin Lake Rd. Met Jerry from Tiger Bay State Forestoffice.

**Site 15** - 547.5, Oak woodland on both sides of road, unburned on both sides

**Site 16** - 547.6, similar to site 15.

**Site 17** - 547.7, near site 27 from fall survey 1998. logged area to east, burned over area to west not logged wet flat *Gordonia*, slash pine.

**Site 18** - 547.8, logged area to east, burned, unlogged to west, Immolokee sands? , check for soil type. West side of road: bracken, sumac, slash pine, *Ilex glabra*, *Lyonia*, *Quercus* (looks like *Ilex opaca*). *Gordonia*, *Gaylussacia*, poison oak, *Vaccinium myrsinites*, *Panicum*, *Hypericum*, *Asimina reticulata*, palmetto, fireweed, *Mimosa*, *Carex*, *Rubus*. East side of logged area, bracken, palmetto, *Lyonia*, *Ilex glabra*, *P. rugelii*, *Gordonia*, heavy soil disturbance, one pawpaw not flower, *A. reticulata*, collected *A. reticulata*.

**Site 19** - 547.9, thinned area to east with some logging, burned area to west with low intensity fire high survival of pines.

**Site 20** - 548.0, just past road (Scrogin Lake Rd), west and just south of road block and north of logging road to east. need soil type immolokee sands possibly, check plants.

**Site 21** - 548.1, just inside gated area, wet flatwoods, logged to west and unburned wet areas to east. walked west area.

**Site 22** - 548.2, unburned pine plantation to east pine palmetto burned but not logged

**Site 23** - 548.3, unburned on both sides. check pawpaws later on west side of roads. road off to east.

**Site 24** - 548.4, unburned areas to east campground Rd? log road to west, logged area to west, some pawpaws in this area, check back later. walked inside area and found. Many pawpaws mostly *reticulata* but possibly other species definitely need to check again.

**Site 25** - 548.5, very scrubby dry to west and burned over, not logged, unburned to east, no pawpaws other than *A. reticulata* in burned area.

**Site 26**- 548.6, burned areas to east and west and both logged. This site is a placed where there is a closed road to the west and a logging road to east. Very dry scrub area, no pawpaws flowering here.

**Site 27** - 548.7, burned over pine stands, not logged yet! Walked on both sides, both sides good for pawpaws, especially east side. Boggy area and cypress dome to the east of slash pine stand. Check for orchids later, has this area been recently burned?

**Site 28** - 548.8, boggy area with small creek crossing road at this point (culverts present), unlogged on both sides. Check for pawpaws and check boggy area

**Site 29** - 548.9, burned areas on both sides of road. Road to west. Good areas for pawpaws. Check on both sides and check bog area to the east. Road to west on this site may be Danny Hole Rd, not sure.

**Site 30** - 549.0, this site is similar to site 29, lots of pawpaws. Check for *Deeringothamnus*.

**Site 31** - 549.1, burned on both sides. Logged on West side. Not logged on east side. Check for *Deeringothamnus*. Lots of wiregrass.

**Site 32** - 549.2, burned sand pine on east. Very dry scrub area. Boggy wet area with *Gordonia* present on west.

**Site 33** - 549.3, similar to site 32.

**Site 34** -549.4, unburned young pine plantation, along road to west. Boggy cypress area to west beyond plantation. Unburned slash pine and live oak area to east. Not many pawpaws present here. pawpaws in pine plantation to west.

**Site 35** - 549.5, cypress dome on west. Wet pond pine area to east with palmetto. Very dry right now both sides of road. This is where photos were taken of white lilies.

**Site 36** - 549.6, young plantation burned over in '98? to west. Unlogged pine plantation completely killed from fire on east. Pawpaws on west. More potential for pawpaws on east side of road. Not much diversity of pawpaws. drought definitely affecting flowering.

**Site 37** - 549.7, young pine plantation to the west. clear cut to the east, some pawpaws visible to the west mostly *A. reticulata*.

**Site 38** - 549.8, same as site 37.

**Site 39** - 549.9, same as site 37.

**Site 40** - 550.0, same as site 37. Clear cut to east. Young unburned pine plantation to west.

**Site 41** - 550.1, same as site 37, north edge of clear cut near this point and pine plantation to west

**Site 42** -burned cypress dome to west and wet creek. Burned wetland to east and cypress dome, stringer to east.

**Site 43** -550.3, unburned pine plantation, young, to west. Burned wet flatwoods logged to cypress dome to east.

**Site 43** -some pawpaws to east but not alot of diversity. should check them out later.

**Site 44** -550.4, same plantation on west, burned cypress dome to east no water present. Cypress coming back.

-site 45, 550.5, west pine flat, burned in wildfires? low intensity burn, not alot of top kill, wet area. On east wet pine flatwoods, burned in 1998? Low intensity, little mortality, no fire scars. *Polygala lutea*.

**Site 46** -550.6, pine flatwoods, burned in '98 to west and east, wet pine flatwoods, different soils, than white sandy areas. This is pawpaw heaven, both sides of road should be checked for pawpaws and other neat plants. nice area.

**Site 47** -550.7, similar to site 46, but not quite as nice, definitely check for pawpaws on both sides of road here.

**Site 48** -550.8, intersection of major road crossing east and west. To the southwest, nice wet flatwood, burned, check for pawpaw and to southeast. Unlogged areas southwest and southeast. On the north west also good area and to the north east but beginning to log this area for timber. Check for pawpaw. Red pawpaw.

**Site 49** -550.9, logged area to east and west, cleared.

**Site 50** -551.0, cleared area on both sides burned. Cypress dome to the west. Check out later very dry now.

**Site 51** -551.1, cleared on both sides

**Site 52** -551.2, same as 51

**Site 53** -burned over wet flatwoods, unlogged to west and to east, heavy soil disturbance on both sides.

**Site 54** -sand pine scrub, burned on west, unburned on east side of road. Scrub, very dry white sands.

**Site 55** -551.5, sand pine scrub, burned to west, unburned sand pine scrub to east.

**Site 56** -551.6, burned, heavy soil disturbed area of scrub with planted slash pine to west unburned scrub and sand live oak area to east, with longleaf.

**Site 57**, 551.7, log road to west, burned sand pine grading northward to wet pine flatwoods with wetland near road. Wet flatwoods burned and unlogged west of dried up pond. To the east is cleared burned over wet pine flatwoods, heavy soil disturbance.

**Site 58**, 551.8, cleared areas to east, logging road to west, cleared to the west, sand pine scrub area.

**Site 59**, 551.9, good burned over unlogged wet pine flatwoods on west, cleared to east. On west lots of *Aristida rhizomophora*, check for pawpaw later, nice are to west.

**Site 60** - 552.0, burned? both sides of road, wet probably didn't burn much on either side of road.

**Site 61** - 552.1, unburned on both sides of road, log road to west.

**Site 62** -552.2, open pine and wiregrass savanna, with longleaf to the east, rxfire? live oak present, to west unburned pine/ palmetto, live oak hammock. East side, *Rhyncosia*, *Stillingia*, did not burn last year for sure.

**Site 63** - 552.3, unburned on both sides, upland, heavy soil disturbance

**Site 64** - 552.4, south end of clear cut on east side of road, wet area, lots of cinnamon fern, coming up and *Gordonia*, present, probably good for orchids? on west unburned wet bay area. Check out *baygall* for cool plants, after rain, very, very dry right now.

**Site 65** - 552.5, baygall, unburned on west, burned live oak palmetto/ pine hammock area to east, very scrubby to east, check area for pawpaws in live oak hammock.

**Site 66** - 552.6, unburned slash pine plantation in scrub very wierd to west, live oak hammock to east. *Ilex opaca* var. *arenicola*, no stellate hairs present, no pawpaws, logged.

**Site 67** - 552.7, cleared scrub area to west burned over sand pine to east with palmetto. Thinned and logged to east.

**Site 68** - 552.8, young pine plantation unburned to west logged, scrub with sand pine and live oak, heavy soil disturbed.

**Site 69** - same as 68. logged live oak hammock to east, young pine plantation to west unburned.

**Site 70** - same as 69, road to east, cleared to east pine plantation to west.

**Site 71** - unburned pine plantation to west, older unburned slash pine plantation to east.

**Site 72** - same as 71

**Site 73** - same as 72, with baygall, unburned to west and mature slash pine to east.

**Site 74** - 553.4, good unburned, upland savanna, mix of longleaf and slash on both sides

**Site 75** - 553.5, cleared to east, no pawpaw flowering, good upland to west, trashed area.

**Site 76** - north entrance gate of Rima Ridge Rd.

#### **4/12/99 - Lake George State Forest, Dexter Unit**

**Site 1** - 594.3 vehicle marker. Check station area of north entrance on Hwy 40. Burned area and cleared on both sides of Road near station.

**Site 2** - 594.4, unlogged burned are to west (good site), logged, cleared area to east, plants on west, wet flatwoods (very large area) longleaf pine, slash pine, palmetto, wiregrass, pawpaws, *Gaylussacia*, gallberry, *Myrica*, shrankia, *Panicum*, *Linaria canadensis*, plantago, *Asters*, *A. rhizomophora*, *Andropogon*, *Schizachyrium*, *Elephantopus*, *Hypericum*, sumac, *Vaccinium myrsinites*. Low intensity burn, some survival.

**Site 3** - 594.5, logging road runs east and west, clear cut to east, burned and unlogged young pine plantation to west, high survival, low intensity burn, slash pine flatwoods, not wet.

**Site 4** - 594.6, high intensity fire to the west, open cleared area with lots of wiregrass and palmetto. Nice area, boggy area to west beyond pine killed. Longleaf survived to west (one to two stems). Cypress dome with lots of dead cypress to east, *Ilex* trees to west, *Ilex cassine* var. *myrtifolia*, *Lyonia*.

**Site 5** - 594.7, cleared and logged on both sides of road with heavy soil disturbance present. *P. rugelii*, smilax, *Dichantherium*.

**Site 6** - 594.8, cleared and logged on both sides of road, *Polygala lutea*. Wet flatwoods to west and east. Cypress dome to west, *Lachnocaulon* aniceps, *Pluchea*, *Viola lanceolata*, nothing flowering in cypress dome, high mortality of cypress.

**Site 7** - 594.9, unburned pasture on both sides of road.

**Site 8** - 595.0, burned cypress dome to east. Check for orchids and etc., later, some cypress survival, open pasture to west, note - this pasture probably burned in 1998.

**Site 9** - 595.1, unburned pasture to east, unburned area of disturbance and wet flatwoods to west.

**Site 10** - 595.2, pasture on both sides.

**Site 11** - 595.3, same as site 10

**Site 12** - 595.4, same as site 11, note- Pasture Rd somewhere in here,

**Site 13** - 595.5, recently burned small palm- pine on east side, pasture to west.

**Site 14** - 595.6, unburned pine plantation (thick young stems) to west, pasture to east.

**Site 15** - 595.7, unburned young pine plantation on both sides of road, heavy fuels!

**Site 16** - 595.8, same as site 15

**Site 17** - 595.9, more mature stand of slash pine on both sides of road. On west looks like rx burn with in past two years.

**Site 18** - 596.0, same as 17

**Site 19** - 596.1, Truck Trail Rd and Rd 3, pine plantations to northeast and northwest. Overgrown pine and hardwood stand to south along Truck Trail Rd.

**Site 20** - 596.2, thick palm hammock, burned with lots of heavy fuels on both north and south sides of road. Some fire has been in here, but not too recently.

**Site 21** - 596.3, sweetgum and Truck Trail Rd, unburned hardwood pine hammock to south, pine palmetto to north, unburned area.

**Site 22** - 596.4, slash pine flat to north, nice area but probably didn't burn in 1998 by wildfires. Unburned slash pine stand to south, unburned for several years high fuel build up.

**Site 23** - 596.5, Zone A/B sign. same as site 22 to south, nice slash pine flatwoods to north, mature uneven stand. Orange flags in area to north. This area burned in wildfires, need to keep an eye on. Nice area of flatwoods. *Gaylussacia*. This is site 40 on map.

**Site 24** - 596.6, burned cypress dome to north, unburned hardwood pine hammock to south, not much flowering in dome. Logged area immediately to west of dome.

**Site 25** - 596.7, pine flatwoods and palmetto burned in 1998? possibly not burned to north. Pine flatwoods not burned in a few years to south.

**Site 26** - 596.8, unburned pine flatwoods to north, unburned pine flatwoods to south.

**Site 27** - 596.9, road closed to south. South open, logged pine area burned in 1998 from wildfires. Many grasses flowering including wiregrass from last fall. To the north, pine- palmetto are probably not burned in 1998.

**Site 28** - 597.0, burned and logged pine area to south, unburned area to north and junction of pond area. Logged pine palmetto area to south with cypress dome. Burned, boggy area to south with pitcher plants, at least 2-4 inches of peat burned in this dome. High survival of cypress. Plants include: *Sagittaria*, *Ericaulon*, sphagnum pond and bald cypress, yellow stargrass, french mulberry and cinnamon fern.

**Site 29** - 597.1, heavy disturbance to soil and clearing to north. Nice open grassy area to south burned in wildfires in 1998. Some logging of trees in area to south, lots of wiregrass flowering, cypress area burned to south of this flatwoods that was logged.

**Site 30** - 597.2, cleared pine forest that burned to south with small cypress area burned over (not alot of mortality), boggy area, to north, pasture with dome in the middle that was burned in 1998 wildfires, not much flowering to north or south.

**Site 31** - 597.3, burned young pine plantation that has had heavy mortality on it to south, pasture to north, south area is heavily soil disturbed.

**Site 32** - 597.35, burned palm hammock with wetland species present and flowering. **Site 33** - 597.4, completely burned over slash pine forest very wet flatwoods not logged, nice site, not a whole lot of flowering on either side of road.

**Site 34** -597.5, same as 33, nice are if not logged.

**Site 35** -597.6, just past wetland are to south, nice area, more of some on both sides, wet pond pine area? north definitely wet and all pines killed. yellow rose thing.

**Site 36** -597.7, *Polygala frondosa* var. *tomentosa*, burned young pine plantation on each side of road, wet pine flatwoods, high mortality, check for orchids and flatwood species, good sites on both sides of road.

**Site 37** -597.8, junction of Rd 2 and ??? , pawpaws, continued burned wet pine flatwoods on both sides of road. fireweed, pawpaws in fruit already, good site for plant surveys.

**Site 38** -597.9, Cleared to north, heavy soil disturbance, burned over wet pine flatwoods, gallberry dominated area, very wet.

**Site 39** -598.0, wet flatwoods, burned on both sides of road, cleared on north, heavy soil disturbance, some *A. longifolia* to south. Soil disturbance heavy.

**Site 40** -598.1, burned over field with some pines still standing, agriculture area?, heavy soil disturbance to south, burned wet area to north, young pines, heavy soil disturbance, *A. reticularis* flowering, probably was good area before soil disturbance. *A. reticularis* flowering in logged areas.

**Site 41** -598.2, where Truck Trail Rd and Shell Rd meet, River Rd. turned around here. bobwhite quail!

**Site 42** -600.6, Truck Trail Rd and Rd 3, unburned area on all sides.

**Site 43** -600.7, overgrown pine areas to north and south. unburned.

**Site 44** -600.8, same as site 43

**Site 45** -600.9, same as site 44, red maple, thick understory, longleaf

**Site 46** -60.10, closed road to south, same as both sides of site 45

**Site 47** -601.1, same as 46, closed road to south too.

**Site 48** -601.2, same as 47, fuels to five feet high.

**Site 49** -601.3, same as site 48, lots of longleaf here, upland savannas possibly to the south.

**Site 50** -601.4, same as site 49

**Site 51** -601.5, same as 50 with more palm trees mixed in forests on both sides and alot to south.

**Site 52** -601.6, same as 51, mature pine forest of longleaf. Unburned and heavy fuels with some palm trees

**Site 53** -601.7, slash and longleaf mix, mature, unburned forest on both sides of road to north was burned with rx fire in last two years. Check for pawpaws later.

**Site 54** -601.8, begin burned area on south. some scorching of palms and some clearance of understory, not alot of diversity or flowering.

**Site 55** -601.9, unburned hardwood hammock, wet on both sides of road, Culvert just to the east of this site.

**Site 56** -602.0, cleared, logged area, large, cleared area on both sides of this road.

Site 57, 602.1, cleared on both sides of road, logged slash pine for fuel sources.

Site 58, 602.2, same as 57.

Site 59, 602.3, just wets of Zone B/C sign. cleared area to north, pitcher plant are to south, pink ribbon still on the tree to mark site. Accuminate tipped *Asimina?* check for flowering later.

**Site 60** - 602.4, totally cleared on both sides, was wet area to north and hardwood hammock to south with pines removed

**Site 61** - 602.5, cleared on both sides, heavy soil disturbance, large area to north, very disturbed site.

**Site 62** - 602.6, same as site 61

**Site 63** - 602.7, cleared to north, unburned hardwood hammock to south.

**Site 64** - 602.8, unburned hardwood area to south, cleared pine and palmetto area to north

**Site 65** - 602.9, Young wet pine flatwoods plantation, burned over and not logged, south cleared to north

**Site 66** - 603.0, wetland burned over, high diversity on north, young slash pine burned over to south not logged, slash pine stand to north not logged either, good site. on north *Gelsimium*, *Gordonia*, *Polygala lutea*.

**Site 67** - 603.1, burned, unlogged, wet slash pine/ palmetto areas on both sides of road. Good sites, lots of gallberry.

**Site 68** - 603.2, burned slash pine-palmetto, unlogged, some survival, no logging, good site, some soil disturbance from previous bedding and high planting density, area to south nicer than area to north.

**Site 69** - 603.3, *Aristida rhizomophora* sites, nice area for plants on both sites, this is site 13 population, no pawpaws here at all.

**Site 70** - 603.4, logged to south, cleared heavy soil disturbance, pine- hardwood transition to wetter areas to north, some diversity to north, not a whole lot flowering.

**Site 71** - 603.5, cleared to south, burned (rx fire?) to the north with high survival of both slash and longleaf pine with wiregrass present.

**Site 72** - 603.6, same as site 71

**Site 73** - 603.7, same as 72

**Site 74** - 603.8, Marsh Rd and Truck Trail Rd. Pine-palmetto to north and clearing on southeast, and southwest of this junction. Turned south on Marsh Rd.

**Site 75** - 603.9, south on Marsh Rd. Cleared on both sides of road

**Site 76** - 604.00, very wet area, palm trees left but cleared on both sides of road, wetland species to the east and more flatwoods to the west, palm hammock burned to the east, past clearing, palm hammock didn't burn completely through.

**Site 77** - 604.1, both sides of road cleared, pine-cabbage palm hammock area with pines removed and scattered palms remaining. *Drosera capillaris*, *Proserpinacan pectinata*.

**Site 78** - 604.2, Jim's Rd and Marsh Rd, *Pinguicula caerulea*, cabbage palm hammock to east. continued south on Marsh Rd.

**Site 79** - 604.3, cleared to east, burned in 1998? cleared to west, pine cabbage palm hammock, logged out pines.

**Site 80** - 604.4, cleared both sides of road, heavy soil disturbance

**Site 81** - 604.5, cleared on both sides, heavy soil disturbance

**Site 82** - 604.6, cleared to east, unburned hardwood hammock to west, end of Marsh Rd, turned around here, Lake Woodruff NWR Boundary.

**Site 83** - 605.0, Jim's Rd and Marsh Rd, headed east on Jim's Rd, to north cleared, some palm trees remaining, to south, logged to edge of hardwood hammock, heavy soil disturbance on each side of road.

**Site 84** - 605.1, cleared to north and south, with palms remaining, north has *Dichromena*, *Sisyrinchium*, *Balduina*, *Pinguicula*, *Gnaphalium*, *Erigeron*, *Linaria canadensis*.

**Site 85** - 605.2, logged on both sides of road. Fire burned through pine cabbage palm hammock and pines removed. Heavy logging activity, logging road to south.

**Site 86** - 605.3, live oak- palm- pine hammock, unburned on both sides of road.

**Site 87** - 605.4, cleared on both sides of road to palm hammock that did not burn to south and hardwood string to north, *Ipomea sagittata*, *Solidago fistulosa*, lots of palm trees left in understory, shrubby area.

**Site 88** - 605.5, same as 87

**Site 89** - 605.6, cleared area to north and burned but not cleared, live oak- palm area to south, area to south does not look healthy, some disturbance there.

**Site 90** - 605.7, burned in 98? probably not (both sides)

**Site 91** - 605.8, not burned (both sides)

**Site 92** - 605.9, not burned in 98, or if at all, low intensity burn

**Site 93** - 606.0, unburned on both sides of road, between here and **Site 92** - is *Piriqueta* and iris heaven and other wetland species.

**Site 94** - 606.1, burned fields on both sides of road, *Andropogon glomeratus*, palm trees and palmettos, soil disturbance? old agriculture area? road bends towards north east again.

**Site 95** - 606.2, open field on both sides

**Site 96** - 606.3, log piles and cleared areas on both sides

**Site 97** - 606.4, cleared area, palm trees left on each side, log piles present

**Site 98** - 606.5, wet pine flatwoods, small ditch filled with *Utricularia inflata*

**Site 99** - 606.6, cleared on both sides of logged pine and palm area.

**Site 100** - 606.7, Green's Rd and Jim's Rd, logged to east along Green's Rd to cypress dome, cleared north and south of Jim's Rd. Wildfire here? south of this area - yes. Headed south on green's Rd.

**Site 101** - 606.8, cleared on both sides, on west side of road is burned over cypress area with high survival of cypress with canna below

**Site 102** - 602.9, south end of clear cut on west side of road, unlogged and unburned area to east, dead oaks, lots of palmetto

**Site 103** - 607.0, end of Green's Rd. Logged pines in palm hammock, bark removed, palm trees burned throughout to west of road, turned around here.

**Site 104** - 607.3, back at Jim's Rd and Green's Rd

**Site 105** - 607.4, cleared on both sides of road, heavy soil disturbance

**Site 106** - 607.5, similar to site 105

**Site 107** - 607.5, similar to site 106

**Site 108** - 607.7, cleared to the west, mature slash pine stand burned with rxfire in spring last year? wiregrass flowering

**Site 109** - 607.8, closed road to east, cleared to west, slash pine stand to east, not burned recently

**Site 100** - 607.9, similar to site 109

**Site 111** - 608.0, Green Rd and Truck Trail Rd, turned west onto Truck Trail Rd, clear cut now on south, burned wet flatwoods with cypress to north

**Site 112** - 608.1, note- check notes from before, this is Truck Trail Rd for sure. Burned slash pine with cypress to north, cleared area to south

**Site 113** - 608.2, cleared on both sides of road, cypress dome left uncut on both north and south sides of road, logged right up to boundary of forest.

**Site 114** - 608.3, cleared on both sides of road, large clear cut area on both sides

**Site 115** - 608.4, same as site 114

**Site 116** - 608.5, same as Site 115 - this is large clear cut area on forest

**Site 117** - 608.6, same as Site 116 - clear cut on north with unburned hardwood area to south in cleared area

**Site 118** - 608.7, cleared on both sides of road

**Site 119** - 608.8, cleared as in site 118

**Site 120** - 608.9, logging road crosses Truck Trail Rd, clear cut on both sides of road. moonscape

**Site 121** - 609.0, cleared to south to unburned hardwood drain

**Site 122** - 609.1, wetter area but logged on both sides

**Site 123** - 609.2, same as site 122

**Site 124** - 609.3, small creek and culvert, burned on both sides across creek, need to come back and check for plants in summer

**Site 125** - 609.4, burned young pines to north, nice are on north, cleared to hardwood area to south palm trees remain

**Site 126** - 609.5, cleared to north and south, cleared on south to unburned hardwood area, to north, logged to cypress dome farther north.

**Site 127** - 609.6, Quarters Rd and Truck Trail Rd, turned north on Quarters Rd, cleared along south side of Truck Trail Rd, cleared to hardwood area, slash pine stand unburned to west side of Quarters Rd, cleared on east side of Quarters Rd

**Site 128** - 609.7, along Quarters Rd, cleared on east and west sides of Quarters Rd, cleared to cypress dome area to the west side, young burned pines farther to east

**Site 129** - cleared on both sides of road, heavy palmetto area, lots of young pines knocked down, check for plants possible on east side of this site.

**Site 130** - burned cypress dome to east, not much flowering in this area, cleared to west

**Site 131** - 610.0, cleared on both sides of road, burned cypress area to the west a little far off, but may be interesting later on.

**Site 132** - 610.1, major logging road crosses east and west, cleared on all four corners of this stop. Is this Pasture Rd - yes.

**Site 133** - 610.2, Young slash pine stand burned to east and cleared to west, unlogged to east, nice area, check for plants

**Site 134** - 610.3, same as Site 133 - but more brush, and less intense burn to east leaving more dead shrub stems.

**Site 135** - 610.4, Fawn and Quarters Rd, north edge of cleared area to west and unburned area of mature slash pine forest to east, turned around here and headed for Pasture Rd.

**Site 136** - 610.6, Pasture and Quarters Rd,

**Site 137** - 610.7, cleared on north and south sides of road

**Site 138** - 610.8, burned over small creek and cypress area. Canna and wetland species present, Cypress coming back

**Site 139** - 610.9, cleared on both sides, to south is burned over slash pine stand, could be good site. totally cleared and logged to north

**Site 140** - 611.0, same as site 139

**Site 141** - 611.1, same as Site 140 - good young slash pine stand to south for plants to check out later

**Site 142** - 611.2, slash pine stand on south meets road then cleared on both sides, cleared to north

**Site 143** - 611.3, cleared on both sides of road

**Site 144** - 611.4, cleared on both sides of road, to slash pine stand to south, that may be good for plants and to the north, young pine plantation burned through. check for plants although heavy soil disturbance evident here.

**Site 145** - 611.5, similar to site 144

**Site 146** - 611.6, cleared area to north, unburned slash pine stand to south

**Site 147** - 611.7, cleared on both sides of road, boggy area, check for orchids later this summer

**Site 148** - 611.8, totally cleared on both sides of road, six turkeys walked by!, end of pasture, headed south, met Zottie, new biologist with DOF and saw eagles nest and irises at Shell Rd (he suggested they were rare plants but just *I. hexagona*).

#### **4/13/99 - Seminole Ranch Conservation Area**

**Site 1** - 748.9 vehicle marker, north entrance at Hwy 46, Hat Bill Rd, no evidence of fire on either side of road.

**Site 2** - 749.5, Gun Club Lane, still no fire areas evident, took gate to right towards fires, a little ways from site 2.

**Site 3** - 749.6, burned area to north and south along road. Very low intensity fire in this area. Hardly any fuel burned.

**Site 4** - 749.7, stayed straight, crossed road running north and south, palm hammock burned on all corners of this intersection.

**Site 5** - 749.8, boggy palm area, wet palm hammock type community, heart of fire, high intensity area, lots of stems dead.

**Site 6** - 749.9, going into more wetter flatwoods with pine more common than palm trees. Very heavy mortality. Flatwood species are pines and palmettos, undisturbed, no logging evident here.

**Site 7** - 750.0, definite wet pine flatwoods with pine-palmetto community, boggy species present - *Lachnocaulon*, *V. myrsinites*, too wet for pawpaws.

**Site 8** - 750.1, crossed small creek, still in burned pine flatwoods area, Bald Eagle flying overhead! must be nesting near here somewhere for it to be so concerned about me being here. Caesarweed present here.

**Site 9** - 750.2, still in burned pines with more palm trees present

**Site 10** - 750.3, pine and palm trees on north end of Lake Ellis, still very wet, *P. rugelii*, bracken and other ferns, somewhat heavy mortality of trees in this area, maybe less intense burn.

**Site 11** - 750.4, palm hammock again, heavy burned area, but not alot of killed palm trees, heavy scorch, marsh area directly to the south.

**Site 12** - 750.5, driving along north edge of marsh with burned cabbage palm hammock to north, and marsh with cattails to south

**Site 13** - 750.6, very wet area with little fuel burned on either side of road

**Site 14** - 750.7, road turns to north into more burned palm hammock area. Burned palm to west, heading north now, and somewhat burned palm hammock to east

**Site 15** - 750.8, still heading north, ditch runs next to road to east, burned palm hammock on east and west sides

**Site 16** - 750.9, unburned plam hammock on both sides of road now, fire more to west of this area.

**Site 17** - 751.0, end of road, in marsh now. turned around here. This is probably when I dented the truck, took too tight a turn and hit a stray palm tree.

**Site 18** - 752.3, took north heading road that crosses main road at site 4 to see where it goes

**Site 19** - 752.4, longleaf pine present here but heavy fuels here that were not burned in 98 wildfires, although cabbage palm is heavily scorched, spotty and less intense burned area.

**Site 20** - 752.5, *Asimina obovata* here, upland area that burned with lots of longleaf pine and bracken. Road is well worn, will be a nice savanna, red maple, *Vitis rotundifolia* present, definitely need to check pawpaws here later, looks possible for *Deeringothamnus* here. *Lyonia* and other associated species present.

**Site 21** - 752.55, road turns west, still in burned area with live oaks, pine, and palm trees.

**Site 22** - 752.6, unburned live oak hammock area with wetter area to the north that is unburned.

**Site 23** - 752.7, back into burned flatwoods with fireweed, wet boggy species

**Site 24** - 752.8, in burned area of flats, this road is parallel but north of the main road I was on earlier, heavy mortality of pines

**Site 25** - 752.9, good turn around area. road turns into two roads, one heading north and the other south, probably links up to other road that I was on heading south, this area is less intensely burned with heavy scorching on palm trees but not heavy fuel reduction. Turned around here (this could also be possible place I dented truck?)

**Site 26**- also site 21 from earlier today, to the north this road turns into the marsh with *I. hexagona* flowering. headed back to entrance gate.

**Site 27** - notes- back down Hatbill Rd, it is 4.4 miles from I-95 west along Hwy 46 to Hatbill Rd, new vehicle marker 763.6 marks Hatbill Rd and Hwy 46.

**Site 28** - 764.3, to first gate on right taken earlier

**Site 29** - 764.8, road turns to south-southwest

**Site 30** - 766.1, road turns to southwest (more westerly but still south). Live oak hammock here in Myaka sands, no pawpaws along road

**Site 31** -766.3, juniper, palms, live oak areas

**Site 32** -766.6, Immolokee sand area is completely overgrown and difficult to access.

*Site 33* -767.2, pine area with live oaks possible pawpaws in area  
*Site 34* -767.7, possible pine and live oak hammock with pawpaws?  
*Site 35* -767.8, St. Johns River Water Management District gate (SJRWMD)  
*Site 36* -768.9, Hatbill park, turned around at park.  
*Site 37* -back at SJRWMD gate.

#### **4/13/99 - Bucklake Conservation Area**

*Site 1* - main gate off Hwy 46, one half mile from I-95, checked immokalokee soils for *Deeringothamnus* with no luck although other pawpaws are evident here, *Campanula floridana* flowering.

#### **4/14/99 - Lake Woodruff National Wildlife Refuge, Volusia Tract**

*Site 1* - 840.2 vehicle marker, entrance gate to tract off Highland Rd (north entrance to tract), upland longleaf pine savanna with heavy fuels. Fire break along northern boundary just plowed to east, area needs fire.

*Site 2* - 840.3, upland longleaf pine savanna

*Site 3* - 840.4, upland longleaf pine savanna, all immokalee sands, need to keep an eye out for pawpaws.

*Site 4* - 840.5, bayhead area, wetter than more upland areas, fire breaks freshly plowed to east.

*Site 5* - 840.6, overgrown upland savanna, gallberry to more than five feet and less than 10 feet high.

*Site 6* - 840.7, more upland savanna, white sands again, still lots of gallberry and bracken thick in understory, needs burning!, firebreak to east

*Site 7* - 840.75, small creek crosses road, bay area around sides of creek

*Site 8* - 840.8, scrub area, lots of scrub species present. Road off to west leads to live oak ridge, road drops to small creek area after ridge and is beautiful area, *Onoclea sensibilis*, *Saururus*, fresh horse poop on Trail.

*Site 9* - 840.9, fire break to east, more upland savanna here.

*Site 10* - 841.0, road here, firebreak to west, upland savanna, longleaf pine and palmetto below

*Site 11* - 841.1, live oak ridge runs east and west across road, soil map excellent for vegetation map for the Volusia tract.

*Site 12* - 841.15, road crosses east and west, live oak ridge on all four corners.

*Site 13* - 841.2, mixed pine savanna and live oak ridge community transitioning into pine savanna to south.

*Site 14* - 841.25, this is where two roads split into a Y formation.

*Site 15* - 841.3, road turns significantly to west into pine savanna areas. Road heads southwest, rockrose present.

*Site 16* - 841.4, becomes wetter site here, like a hardwood hammock, more than a live oak ridge with interesting ericaceae shrubs.

*Site 17* - 841.45, crossed large creek with wooden bridge, definite hardwood hammock area, cool ferns, pickerel weed and wetland plants. need to check out for survey

*Site 18* - 841.5, different soil type here, wetter vegetation, sphagnum in ditches and *Gordonia* around, pond pine present.

*Site 19* - 841.6, back to upland longleaf pine savanna with palmetto layer in understory, this area more recently burned? (less than five years ago?)

*Site 20* - 841.7, upland longleaf pine savanna still, road crosses east and west, nice area recently burned ?

*Site 21* - 841.8, heavy fuels area, upland longleaf pine savanna, sandy area, bracken, *Lyonia*, palmetto

*Site 22* - 841.9, well head and old home site, very cleared and wierd area, open, like old site of some kind in longleaf pine savanna.

*Site 23* - 842.0, similar to site 21, upland longleaf pine savanna, scrub, pine and palmetto

*Site 24* - 842.1, same as site 23

*Site 25* - 842.15. Powerline Rd meets road and runs east and west, headed west along Powerline Rd to wild fire area

*Site 26* - 842.2, fresh firebreak in longleaf pine savanna area to south

*Site 27* - 842.3, along Powerline Rd, upland longleaf pine savanna on both sides of Powerline Rd

*Site 28* - 842.4, east-west junction of Powerline Rd and north-south Powerline Rd. went south along Powerline Rd and looked at wildfire area to west.

*Site 29* - 842.45, *Zigadenus* present, wet areas along Powerline Rd to south

*Site 30* - 842.5, wildfire area to west and east side of road, upland area with very low basal area of trees with palmetto below.

*Site 31* -842.6, same as site 30 on both sides of road.

*Site 32* -842.7, airborne! there is a large hole along this road and this is probably where I obtained my inner ear problem. This site is same as site 30, with wildfire on both sides of road.

**Site 33** -842.8, gate at south end of Powerline Rd, firebreak on south side of property, turned east along firebreak.

**Site 34** -842.9, along south boundary firebreak, upland savanna to north, nice for longleaf pine species like *centrosema* etc.,

**Site 35** -842.95, firebreak to north

**Site 36** -843.0, at main gate for south entrance along paved road.

#### **4/14/99 - Lake Woodruff NWR, Tick Island Trip**

Boated along St. John's River to landing dock on Tick Island.

#### **SUMMER SURVEY 1999**

##### **6/5/99 - Tiger Bay State Forest, Rima Ridge**

**Site 1** - 666.6 vehicle marker, entrance gate to Rima Ridge Rd

**Site 2** - 667.2, left turn to Indian Lake Rd.

**Site 3** - 667.4, road to left, went straight

**Site 4** - 667.5, campground, went back to last fork in road to collect white foxglove thing.

**Site 5** - 667.7, back at fork again, took road to south (left fork earlier), now a right turn.

**Site 6** - 667.8, collected *Cacalia* thing

**Site 7** - 668.0, cross roads past gate, road to north goes to lake, road to south goes through immolokee soils, went to south.

**Site 8** - 668.2, turned around on road and back along Bear Island Rd towards NE.

**Site 9** - 668.6, on right, *Deeringothamnus rugelii* found. Marked 10 plants probably alot more, need to survey this area more thoroughly, pink flag along road to indicate where to pull off.

**Site 10** - 668.75, marked 10 more plants along roadside.

**Site 11** - 668.8, flowering plant marked on southwest side of road.

**Site 12** - 668.9, 10 plants marked to northeast of road scattered, trees marked in general vicinity. Look in disturbed ruts of logging Trails.

**Site 13** - 669.0, more pawpaw found in flower, one plant marked (tree near it marked).

**Site 14** - 669.1, cypress area no more pawpaws found

**Site 15** - 669.2, gate to private property.

**Site 16** - 669.7, five plants of pawpaw marked on north side of road - private? probably occurs on southside of road as well, great big plants with flowers on south side of road marked with pink flagging.

**Site 17** - 669.9, water wells to south, collected red *Galactia* thing.

**Site 18** - 670.1, North, Bear and Center Rds meet. turned left onto Center Rd.

##### **6/6/99 - Lake Woodruff NWR, Volusia Tract**

**Site 1** - 743.3 vehicle marker, at gate at southern end of tract. Stirred up three swallow-tailed kites upon entering, they flew off. No pawpaws in pine-palmetto to west or east, not even *A. reticulata*.

**Site 2** - 743.4, same as site 1

**Site 3** - 743.5, same as site 2

**Site 4** - 743.6, same as site 3

**Site 5** - 743.7, same as site 4, dry palmettos are yellow in color!, very dry and crunchy everywhere. Need to calculate fuel moistures.

**Site 6** - 743.8, at Powerline Rd, turned west

**Site 7** - 744.2, along Powerline Rd to west, stopped and looked for pawpaws, found *A. angustifolia*, but no *Deeringothamnus*

**Site 8** - 744.3, turned around at junction of Powerline Rd and western most fireline. Headed east along Powerline Rd, drove around the west fireline to Hwy 44 then turned around and headed east back to Powerline Rd.

**Site 9** - 745.6, Powerline Rd and southgate road again, heading north of Powerline Rd.

**Site 10** - 7461, turned west from main north-south road.

##### **6/7/99 - Tiger Bay State Forest, Rima Ridge**

**Site 1** - 811.4 vehicle marker, junction of Indian Lake and Rima Ridge Rds.

**Site 2** - 811.5, *Cacalia* found in scrub area, soil types 17 and 19.

**Site 3** - 812.8, road to Lake Scroggin?

**Site 4** - 812.9, collected tar flower - *Befaria*

**Site 5** - 813.0, found and marked two pawpaws along west side of road. Two trees are marked with pink flagging in forest. A log leaning over road at an angle marks location along road to pull off. Immolokee soils here.

**Site 6** - 813.15, turned west onto old logging road into logged field in immolokee soils. Looked good for pawpaws, collected *Agalinis divaricata* and white legumes.

#### **6/7/99 - Lake George State Forest, Dexter Unit**

**Site 1** - met with Jason the wildlife biologist of the forest to show me how to get to Dexter Point. Drove down Dexter Point Rd and started marking from north edge of live oak hammock along rivers edge and headed northward. Vehicle marker 972.5. Note to get mileage from Shell Rd to Dexter Point Rd.

**Site 2** - 972.6, wet pine flatwoods

**Site 3** - 972.7, wet pine flatwoods, very dry and sandy too, lots of wiregrass and scrubby oaks. collected white legume thing, no pawpaws

**Site 4** - 972.8, Road to west comes off main road. Flatwoods around, still very dry and sandy, scrub vegetation below slash pines, burned over. *Asimina reticularia*, *A. obovata*, *A. pyramida*

**Site 5** - 972.9, lots of *Asimina reticularis* in flatwoods area.

**Site 6** - 973.0, wet flatwoods, like other areas, white legume thing is *Galactia elliotii*, no pawpaws, *A. reticularis*.

**Site 7** - 973.1, scrubby to west, wet pine flatwoods to east, no pawpaws, field just past scrubby area to west.

**Site 8** - 973.2, *Asimina pygmaea*, that looks alot like *Deeringothamnus*, but isn't, *A. reticularis*

**Site 9** - 973.3, slightly lower area, pine-cabbage palm hammock to west, flatwoods to east, no *Deeringothamnus*, plenty of *A. pygmaea*, *A. reticularis*.

**Site 10** - 973.4, lots of pawpaws, *Asimina city*. *A. reticularis*, nice area, no *Deeringothamnus*

**Site 11** - 973.5, started raining, storm came in, headed back

**Site 12** - 973.6, good place to come and check later

**Site 13** - 973.65, good place to come back to and check out.

**Site 14** - 973.7, another good place to check out.

**Site 15** - 973.8 good place to check out

**Site 16** - 973.9, good place to check out.

**Site 17** - 974.0, possible, but other sites to the south might be better

**Site 18** - 974.05, possible, some pawpaws present

**Site 19** - 974.1, palms coming in, possibly wet, probably not that good to survey

**Site 20** - 974.2, hardwood hammock

**Site 21** - 974.3, wet pine flatwoods, possible site for survey, some pawpaws present

**Site 22** - 974.4, good area to survey

**Site 23** - 974.5, south end of grassy logging turn around to the south is good flatwoods area.

**Site 24** - 974.55, Truck Trail Rd #7

**Site 25** - 975.0, gate, somewhere between 974.6, and 975.0 is Rd 2 and Truck Trail Rd #7

**Site 26** - 975.2, Shell Rd and Truck Trail Rd #7, turned north on Shell Rd to exit unit.

Seminar at Native Plant Society Meeting Day

#### **7/13/99 - Tiger Bay State Forest , Main Unit**

Lat. 081.11.20 N

Long. 29.06.94 W

**Site 1** - 618.7- Center Rd/Brick Rd and Hwy 92, Roadside

**Site 2** - Old flatwoods site- logged and cleared, Begin Center Rd and junction of Brick Rd and Center Rd, 29.07.11N,81.11.02W, logged and burned area. Near site 2 Cypress dome area finally has standing water,

*Pluchea* on roadside, Jct. Of Brick and Center Rd, 29.07.17 N, 81.11.06 W

turned around at site 2, new marker start at site 2 and Center Rd- 619.1

**Site 3** - 0.25 miles from site 2 (619.35), bracken dominated flatwoods, logged and cleared but coming back-strong-part of site 2 clear cut, 29.07.39N, 81.11.13W, Roadside and in site.

**Site 4** - 0.25 miles from site 3 (619.6), 29.07.58N, 81.11.24W, Logged and cleared flatwoods; dominated by *Lachnanthes*.

**Site 5** - Tiger Bay State Forest 7/13/99, 0.25 miles from site 4 (619.85), very wet flats-*Lachnanthes* dominated, 29.07.84N, 81.11.10W.

**Site 6** - 0.25 miles from site 5 (620.1), 29.07.61N, 81.10.59W, Unburned area, wet flats, No survey done

**Site 7** - (620.4) 0.30 miles from site 6

Junction Dark Entry and Center Rd. And Bear Island/North Rd. 29.08.28N, 81.11.25W, -very, very wet area.

**7/13/99 - Tiger Bay State Forest, Main Unit**

Dark Entry and Center Rd., 29.09.44N, 81.11.28W

**Site 8** - 0.25 miles north from jct Dark Entry and Center Rd (on Center Rd), very wet flats, *Lachnanthes* dominated area on both sides of Rd, collected on both sides of Rd, cleared flat woods.

*\*Note all Lachnanthes is Lachnanthes*

**Site 9** - 0.30 Wampee Rd off Center Rd, Other side of Rd (in addition to site 8's list): this side is wetter

**Site 10** - 0.5 miles from site 9, Bracken dominated area, cleared area, 29.09.44N, 81.11.28N, Cypress not burned over on east side of road

**7/14/99 - Lake Woodruff NWR, Volusia Tract**

Along Railroad Rd looking for fire, Along Railroad Road, East unit-Gamma Grass, Unit 6 huge patch, Sand pine,

Lightning strike tree needs cutting between unit 10 and 11.

**7/14/99 - Lake Woodruff NWR, Entrance Road**

Hammock entrance. Entrance road has hardwood area to left and pine flats to right then grades into pine flats on both sides of road., Pine flat plants - this was burned within last 10 years, on further down the road, Pine flats get higher in fuels.

**7/14/99 - Lake Woodruff NWR, Impoundments**

Come out when dry!

**7/14/99 - Lake Woodruff NWR, Hammock Nature Trail**

see plant list

**7/15/99 Tiger Bay State Forest, Main Unit**

- west along Dark Entry Rd, from Center Rd- Jct. Center and Dark Entry Rds, 105.25 westward along Dark Entry Rd burned on both sides-surveyed the other day when on Center Rd

**Site 1** - 105.5, Clear cut and logged wet pine flats, only unusual reported plants, pretty heavy disturbance, not a lot of palmetto.

**Site 2** - 0.25 miles from site 1 (105.75), Heavy logged area to north - urban interface.

South, heavy slash on north side, wet pine flats - *Lachnanthes* dominated area on north, more upland soil to east end of clear cut. Come back and look for paw paws?

**Site 3** - 0.25 miles from site 2 (106.0), both sides unburned, very wet, standing water, bay gall/cypress dome.

**Site 4** - 0.15 miles from site 3 (106.15), *Aletris*.

**Site 5** - 0.10 miles from site 4 (106.25), On north forest burned slightly and not logged- pine flat on south cleared area of wet flat logged and dominated by *Lachnanthes*, Lamiaceae thing on southside, northside, *Asimina pygmaea*, *A. Reticularis*.

**Site 6** - 0.25 miles from site 5 (106.5), Low intensity burned on both sides - Rx burned? Standing trees on both sides.

**Site 7** - 0.10 miles from site 6 (106.6), Cleared and logged on both sides.

**Site 8** - 0.15 miles from site 7 (106.75), Cleared on both sides; diverse to north; wet flats.

**Site 9** - 0.15 miles from site 8 (106.9), Unlogged, burned young stand to north

Large clear cut to south.

**Site 10** - 0.10 miles from site 9 (107.0), Cleared and logged on both sides

-on north only small area by roadside not logged but large clearing behind, Walked through cypress dome

-trees that were alive had large bases and were well above water/fire line.

**Site 11** - 0.25 miles from site 10 (107.25), Cleared to south- *Lachnanthes* dominated wet pine flats? To north young pine plantation that was burned by many tree survived.

**Site 12** - 0.25 miles from site 11 (107.5), Powerline Rd turned north

**Site 13** - 0.10 miles from site 12 (107.6), Turkey heading to the woods

**Site 14** - 0.15 miles from site 13 (107.75), Cleared for Powerline Rd but very wet. Interesting area.

**Site 15-** 0.25 miles from site 14 (108.0), Wet area too good for aquatics.  
**Site 16-** 0.25 miles from site 15 (108.25), Same as the last stop  
**Site 17-** 0.05 miles from site 16 (108.3), Turkey Trail  
**Site 18-** 0.20 miles from site 17 (108.5), Ponds on both sides.  
**Site 19-** 0.10 miles from site 18 (108.6), Road to east  
**Site 20-** 0.40 miles from site 19 (109.0), Powerline Rd still- wet area.  
**Site 21-** 0.25 miles from site 20 (109.25) , Same as site 20  
**Site 22-** 0.25 miles from site 21 (109.5), Powerline Rd and wet still  
**Site 23-** 0.25 miles from site 22 (109.75), Plants of seep.  
**Site 24-** 0.25 miles from site 23 (110.0), Jnct. North and Powerline Rd, Wet areas still along Powerline Rd, North Rd, pokesalad  
**Site 25-** 0.25 miles from site 24 (110.25), Along North Rd towards Center Rd on south side of Rd is cleared area  
**Site 26-** 0.25 miles from site 25 (110.5), Wet flat burned and partially logged.  
**Site 27-** 0.25 miles from site 26 (110.75), Drier area of wet flats, *Helianthus* dominate.  
**Site 28-** 0.25 miles from site 27 (111.0), Wet *Lachnanthes* area, not burned  
**Site 29 -** 0.25 miles from site 28 (111.25), Where Wampee Rd comes out  
*Asimina reticularis*, Good paw paw habitat.  
**Site 30-** 0.25 miles from site 29 (111.50), Young plantation burned but some trees still alive, wet flat (Rain stopped)  
**Site 31-** 0.25 miles from site 30 (111.75), Good paw paw habitat need to check later  
**Site 32-** 0.25 miles from site 31 (112.0), Road here- collected *Solidago*, -small purple shrubby thing here along west side of rd.  
**Site 33-** 0.10 miles from site 32 (112.10), Good paw paw habitat- check later  
**Site 34-** 0.15 miles from site 33 (112.25), Good paw paw habitat- check later  
**Site 35-** 0.15 miles from site 34 (112.4), Good paw paw site, too.  
**Site 36-** 0.10 miles from site 35 (112.5), High disturbance- lots of eup.cap.  
**Site 37-** 0.25 miles from site 36 (112.75), Good paw paw area- check later, -Jnct. North and Center Rds. -turned south on Center Rd.  
**Site 38-** 0.25 miles from site 37 (113.0), Good paw paw to west, logged, check out overgrown on east, black vultures on roost  
**Site 39-** 0.25 miles from site 38 (113.25), Wet pine flat to west, that was logged with cypress dome still visible, -to east mature slash pine plantation unburned  
**Site 40-** 0.25 miles from site 39 (113.5), Burned cypress, wet area both sides standing trees with ponds with lily pads.  
**Site 41-** 0.25 miles from site 40 (113.75), Burned? Cypress area many line trees with little scarring or scorching to west., Wet pine flats to east, some scorching (Rx burn?)  
**Site 42-** 0.25 miles from site 41 (114.0), Both sides look good for paw paw, Cut over on both sides Probably pine palmetto, good soil type  
**Site 43-** 0.25 miles from site 42 (114.25), West side good for paw paw, just south of ponded area to west, cypress dome unburned to east  
**Site 44-** 0.25 miles from site 43 (114.5), Wampee Strand Rd.  
 Check for paw paw?

#### 7/16/99 Tiger Bay State Forest, Main Unit

**Site 1 -** 153.3 Jnct. Wampee and Center Rd.  
**Site 2 -** 0.25 miles from site 1 (153.55), Good habitat for paw paws, bracken dominated area, no paw paw present, collected wierd *Lyonia* though, wet flat, cleared, *Lyonia fruticosa*  
**Site 3 -** 0.05 miles from site 2 (153.6), *Nymphaea odorata*-pond  
**Site 4 -** 0.20 miles from site 3 (153.8), Lots of *Eupatorium albidum*, Both sides of Rd. Cleared 29.08.96 N, 81.11.35 W, *Asimina angustifolia*- west side, *A. obovata*?, Heavy disturbance from logging, No *Deeringothamnus*, East side, *Sabatia*-white, *Asimina angustifolia*, *A. pygmaea*, no *Deeringothamnus*  
**Site 5 -** 0.25 miles from site 4 (154.05), Ponds and cypress areas, both sides, unburned on west, flatwoods slightly burned on east side  
**Site 6 -** 0.25 miles from site 5 (154.3), Pond and cypress dome on west, unburned and unburned pine palmetto to east  
**Site 7 -** 0.25 miles from site 6 (154.55), Unburned pine-palmetto to east, burned and cleared wet flats (*Lachnanthes* dominated) areas to west little species diversity here

- Site 8** - 0.15 miles from site 7 (154.7), Clear cut cypress dome. (bad)
- Site 9** - 0.10 miles from site 8 (154.8), Pine/palmetto, west side, Unburned on east.
- Site 10** - 0.10 miles from site 9 (154.9), Microwave tower, pokesalad??
- Site 11** - 0.10 miles from site 10 (155.0), Good pine palmetto habitat, unburned on east, diverse area, *Polypremum*, *Rhexia* white with pink inside, *Asimina angustifolia*
- Site 12** - 0.10 miles from site 11 (155.1), Junct. Center and North and Bear Island Rd. 29.10.03N, 81.11.46W.
- Site 13** - 0.15 miles from site 12 (155.25), *Aristida rhizomophora*, nice site, but no *Deeringothamnus* seen
- Site 14** - 0.25 miles from site 13 (155.5), Wet logged area with *Lachnanthes* dominate
- Site 15** - 0.25 miles from site 14 (155.75), No *Deeringothamnus*, logged and cleared, flatwoods
- Site 16** - 0.25 miles from site 15 (156.0), *Lachnanthes* city, good for aquatics
- Site 17** - 9.6 miles from site 16 (165.6), North gate of Woody Rd and Hwy 92, cypress area, wet good aquatics, *Sesbania*
- Site 18** - 0.10 miles from site 17 (165.7), Barrow pit on east, wet flat to west
- Site 19** - 0.10 miles from site 18 (165.8), High disturbance to west, *Eupatorium capillifolium*, vasey grass, lots of other exotics, barrow pit to east
- Site 20** - 0.05 miles from site 19 (165.85), Road to east, heavy slash pile to west
- Site 21** - 0.05 miles from site 20 (165.9), Cross roads-took right fork along soil type 49? Woody Rd. and Tomoka Trail Rd junct.
- Site 22** - 0.10 miles from site 21 (166.0), Wet flat palmetto and gallberry and *A. angustifolia* only- little diversity
- Site 23** - 0.10 miles from site 22 (166.1), Wet flats
- Site 24** - 0.10 miles from site 23 (166.2), Cypress area, unburned on east
- Site 25** - 0.10 miles from site 24 (166.3)Wet flat both sides, bracken mixed with cinnamon fern, no paw paws, west and east unlogged
- Site 26** - 0.10 miles from site 25 (166.4), East side logged, west side looks good, no paw paws!
- Site 27** - 0.50 miles from site 26 (166.9), Looks good to east- *Aristida rhizomophora*, not logged area- no paw paw!
- Site 28** - 1.10 miles from site 27 (168.0), Jnct. Takoma and Woody, heading south on Takoma

#### **7/17/99 Tiger Bay State Forest, Main Unit**

- Site 1** - 234.65, Gate at Woody Rd and Hwy 92
- Site 2** - 0.35 miles from site 1 (235.0), Split in Rd, took right (west), fork- Woody Rd.
- Site 3** - 1 mile from site 2 (236.0), Cleared log that I turned around for yesterday, *Aristida rhizomophora* both sides of Rd.High palmetto fuels, good paw paw habitat, but not alot of paw paws of any type due to high palmetto thickets? shade, intolerant? Studies of the ecological amplitude of restoration species of longleaf pine wire grass ecosystems
- Site 4** - 0.80 miles from site 3 (236.8), Good habitat but only *A. pygmaea*, this is closest to Powerline Rd, there may be an interesting *Carphephorus* out there.
- Site 5** - 0.45 miles from site 4 (237.25), Good habitat- but no paw paw, too wet?  
*Eupatorium*, *Pluchea rosea*, collected *Stillingia sylvatica*
- Site 6** - 0.10 miles from site 5 (237.35), Cross Rd. Walked all directions- *Eupatorium* and *Pluchea*
- Site 7** - 0.10 miles from site 6 (237.45), End of Rd., Rd. turns to east, no paw paws
- Site 8** - 0.05 miles from site 7 (237.5), Good area for paw paws but heaily logged.
- Site 9** - 0.10 miles from site 8 (237.6), Road forks, took (north east) left fork towards Tomoka Trail Rd.
- Site 10** - 0.10 miles from site 9 (237.7), Road forks, took east (right fork) (0.3-0.5 miles from Road Junct. Of Tomoka and Woody)
- Site 11** - 0.70 miles from site 10 (238-238.4) , Along ditch between road and highway south of Tomoka Rd.
- Site 12** - 0.20 miles from site 11 (238.6), Road goes to west along ditch and right along ditch to east, great for paw paws, lots of *A. angustifolia*, no *Deeringothamnus* here.
- Site 13** - 0.10 miles from site 12 (238.7), Junct. of 2 roads (prob. Woody and Tomoka) 29.04.45N, 81.11.08W, *Baptisia lactea?*(alba), *Dalea cornea*
- Site 14** - 0.30 miles from site 12 (239.0), Checked, no paw paw
- Site 15** - 0.15 miles from site 14 (239.15), *Lechea*, *Conyza*
- Site 16** - 0.25 miles from site 15 (239.4), No paw-paws
- Site 17** - 0.40 miles from site 16 (239.8), Nice wet meadow to east
- Site 18** - 0.40 miles from site 17 (240.2), Nice area? logged and cleared

- Site 19-** 0.25 miles from site 18 (240.45), Burned unlogged slash to west, cleared to east, too wet for paw paw, *Xyris caroliniana*
- Site 20-** 0.30 miles from site 19 (240.75), Gate to Tomoka Trail, walked pretty nice area, hypericum c
- Site 21-** 0.15 miles from site 20 (240.9), Nice wet depression!
- Site 22-** 0.30 miles from site 21 (241.2), Split Tomoka and Woody Rds.  
29.04.45N, 81.11.05W

#### **7/19/99 Tiger Bay State Forest, Main Unit**

- Site 1 -** 368.9 south entrance of Tiger Bay in from 92, attempt to re-find paw paw location, Dukes Island Rd south
- Site 2 -** 0.40 miles from site 1 (369.3), Canal and Dukes Island Rd., Stayed on Dukes Island Rd.- Canal Rd. needs to be checked too.
- Site 3 -** 0.70 miles from site 2 (370.0), Rd. to west, Big log piles
- Site 4 -** 0.10 miles from site 3 (370.1), *Carphephorus odoratissima* and yellow legume thing, *Ludwigia peruviana*, 29.06.47N, 81.10.39W
- Site 5 -** 1.1 miles from site 4 (371.2), Rd. to east- come back to
- Site 6 -** 0.70 miles from site 5 (371.9), Turned around at old rest stop, headed back
- Site 7 -** 0.20 miles from site 6 (372.1), Cypress dome begins-east side
- Site 8 -** 0.30 miles from site 7 (372.4), Cypress dome ends
- Site 9 -** 0.25 miles from site 8 (372.65), Turned east onto Rd. off Dukes Island Rd.
- Site 10 -** 0.30 miles from site 9 (372.95), Big hole, careful, go slow
- Site 11 -** 0.15 miles from site 10 (373.1), Major water here, pink flag  
29.05.60N, 81.09.63W turned around, Notes- thick pines had lots of palmetto, little diversity
- Site 12 -** 0.50 miles from site 11 (373.6), Back to Dukes Island Rd.
- Site 13 -** 0.05 miles from site 12 (373.65), Small turn around, Parking lot with blanket and Bosch Beer cans
- Site 14-** 0.25 miles from site 13 (373.9), Pine flats cleared.
- Site 15-** 0.10 miles from site 14 (374.0), Pine flats, cleared, *Carphephorus* on west side of Rd, check later
- Site 16-** 0.75 miles from site 15 (374.75), Cleared area and wet flats
- Site 17-** 0.55 miles from site 16 (375.3), *Lythrum lineare* on east
- Site 18-** 0.10 miles from site 17 (375.4), *Gaylussacia tomentosa*, *Cynodon dactylon* in roadside, *Xyris junacei*, *Ludwigia maritima*, *Xyris caroliniana*, *verbena officinalis*
- Site 19-** 0.10 miles from site 18 (375.5), Canal Rd.
- Site 20-** 0.10 miles from site 19 (375.6), Wet flat-logged, *Lactuca floridana*, *Sabatia brevifolia*

#### **7/20/99 Lake George State Forest, Dexter Unit**

- Site 1 -** 476.6 Jct. Truck Trail Rd 7 and Dexter Point Rd.
- Site 2 -** 1.2 miles from site 1 (477.8), Stopped due to puddles, Along Rd.
- Site 3 -** 0.90 miles from site 2 (478.7), Wet pine flats- soil 29.
- Site 4 -** 0.10 miles from site 3 (478.8), Sandy and dry.
- Site 5 -** 0.20 miles from site 4 (479.0), Dry-moist pinelands, palmetto, *Polygala lutea* and previous list  
Will *Carphephorus* flower this year?, took Rd. to west.
- Site 6 -** 0.20 miles from site 5 (479.2), Rd. to south goes into wet hammock area, kept on main Rd. in dry-wet pinelands- grassy pinelands, main rd. turns north
- Site 7 -** 0.20 miles from site 6 (479.4), Main Rd. north bound along western edge of soil 29, still wet-dry pine with palmetto and grass, longleaf pine savanna country
- Site 8 -** 0.10 miles from site 7 (479.5), Low intensity burn, but burned last year, needs more burning to really knock back
- Site 9 -** 0.10 miles from site 8 (479.6), Burned pine plantation on both sides? Rd to west
- Site 10 -** 0.20 miles from site 9 (479.8), Wet/dry flats- savanna
- Site 11 -** 0.05 miles from site 10 (479.85), Rd merged with main rd. back to Truck Trail Rd
- Site 12 -** 0.15 miles from site 11 (480), Wet flat area, no *Deeringothammus*
- Site 13 -** 0.20 miles from site 12 (480.2), Nice wet pine flat, low diversity, rained out again!

#### **7/20 /99 - Tiger Bay State Forest, Rima Ridge Unit**

- Rima Ridge Rd on hunt for second *Pteroglossaspis* population
- Site 1 -** 520.3 gate at Hwy 40 and Rima Ridge Rd
- Site 2 -** 2.1 miles from site 1 (522.4), Major rd to east

**Site 3** - 0.60 miles from site 2 (523.0), Cross rds.

**Site 4** - 0.80 miles from site 3 (523.8), *Pteroglossaspis*, 29.12.14N, 81.10.11W

**7/21/99 - Lake Woodruff NWR, Volusia tract**

**Site 1** - Garberry 29.03.01N, 81.22.22W, check out magnolia and live oak orchid

**7/22/99 - Lake George State Forest, Dexter Unit**

**Site 1** - 641.8 Jnct. Truck Trail Rd #3 and Hwy 40

**Site 2** - 0.10 miles from site 1 (641.9), Grassy flat to east and west burned, logged on west, unlogged on east.

**Site 3** - 0.10 miles from site 2 (642), East side, all before plus- wet flat burned, cleared.

**Site 4** - 0.20 miles from site 3 (642.2), Cleared and burned flats, *Mimosa*

**Site 5** - 2.8 miles from site 4 (645), Rd 4 and Truck Trail Rd 7, additional species- wet pine flat burned and cleared, panic grass dominant.

**Site 6** - 0.20 miles from site 5 (645.2), Very wet flat, went to area with marked wire grass on Truck Trail Rd- west plants still marked., *Gaylussia dumosa*, Note *Linaria* thing

**Site 7** - 1.4 miles from site 6 (646.6), Marsh Rd., Blue heart- *Buchnera americana*, terrestrial orchid leaves off Marsh Rd. Diamond Back Rattler, *Pluchea rosea*, *Cyperus/Carex Scleria*, Rd 3- *Crotalaria pallida*

**Site 8** - 6.3 miles from site 7 (652.9) , Almost to Hwy 40

**Site 9** - 3.7 miles from site 8 (656.6), Truck Trail Rd #7 west of Zone B sign, *Asclepias pedicellata* , took southern Rd. off Truck Trail Rd, lots of paw paw, *Dalea carnea*, *Asimina pygmaea*, *Asclepias pedicellata*, *Eupatorium rotundifolium*

**Site 10** - 0.20 miles from site 9 (656.8), *Eclipta alba*, *Bacopa caroliniana*, *Verbena scabra*

**7/23/99 Hwy 100, west of Rd 1**

**Site 1** - 11.9-12.1.

12.0 and 12.1 more *H. carnosus* on north side of Rd

**Note:** other pops of *H. carnosus* along Hwy 100

**Site 2** - 2 miles from site 1 (14.1), 1 plant

**Site 3** - 0.10 miles from site 2 (14.2), 2 plants

**Site 4** - 1.4 miles from site 3 (15.6), 20 plants, also need to check carpheporous, leaves in Sept. (basal rosette present)

**Site 5** - 2.1 miles from site 4 (17.7), Rd. 305 and 108

**Site 6** - 3 miles from site 5 (20.7- 20.9), More *H. carnosus*, > 30 plants within this area. Also large basal leaves of something coming up like a *Rudbeckia/Helianthus radula* etc.

**Site 7** - 0.20 miles from site 6 (20.9), More *H. carnosus*, *Aletris*, *Marshallia*, *Plantago*, *Liatris* sp.

**Site 8** - 0.30 miles from site 7 (21.2), 302 Hwy.

**Site 9** - 0.90 miles from site 8 (22.1), *H. carnosus*. ~ 10 plants, (east of Hwy 302)

**Site 10** - 20.1 miles from site 9 (42.2), Hwy 302 and 100, headed north along 100

**Site 11** - 0.10 miles from site 10 (42.3), *Lilium Catesbaei*, pitchers, *Aletris*, *H. carnosus* (10 plants), *Carpheporus*, *Liatris*, *Marshallii*

**Site 12** - 0.20 miles from site 11 (42.5), More *Helianthus carnosus*~ 10 plants

**7/25/99 - Tiger Bay State Forest, Rima Ridge Unit**

**Site 1** - 76.0, At Rd. to scrub, I went to same location for *Pteroglossaspis ecristata* and found *Nolina* < 5 plants, scrub area.

**Site 2** - 76.7 to Hwy 40

**7/25/99 Heart Island Conservation Area**

**Site 1** - 99.8 Truck Trail Rd #11 and Hwy 40

**Site 2** - 0.70 miles from site 1 (100.5), Pine rd- turned east on Pine Rd, mature slash, pine plantation with palmetto

**Site 3** - 0.15 miles from site 2 (100.65), End pine plantation begin longleaf young pine plantation, heavy soil, disturbance and trash

**Site 4** - 0.15 miles from site 3 (100.8), Turned around, noted lots of wire grass, and bracken in pine plantation- nice area- soil type 49, pomous sands.

**Site 5** - 0.35 miles from site 4 (101.15), Back on Truck Trail Rd #11

- Site 6** - 0.85 miles from site 5 (102), Chessor Rd., locked gate, no combo, went around #4399
- Site 7** - 1.9 miles from site 6 (103.9), Hwy 40 and Bee Rd, South side of Lake George area, pine flat, wet, soil 49
- Site 8** - 0.20 miles from site 7 (104.1), Rd to west still wet pine flat, heavy fuels
- Site 9** - 0.30 miles from site 8 (104.4), Rd to east and a little farther down, Rd is Rd to west that is very wet
- Site 10** - 0.05 miles from site 9 (104.45), Wet hole area *Panicum* dominated
- Site 11** - 0.05 miles from site 10 (104.5), Deep creek and Bee Rd
- Site 12** - 0.10 miles from site 11 (104.6), Low intensity wildfire or herbicide, recent fire- Rx burn?, around this whole unit
- Site 13** - 0.50 miles from site 12 (105.1), End one unit, begin another, all burned to south
- Site 14** - 0.10 miles from site 13 (105.2), Rd to north in unburned high fuels area
- Site 15** - 0.05 miles from site 14 (105.25), Deciduous woods, hardwoods, area unburned, deciduous, soil 24, Floodplain forest but not a lot of palms
- Site 16** - 0.25 miles from site 15 (105.5), End of Rd, gate here, fire continued to here, turned around here and headed west on Deep Creek Rd.
- Site 17** - 0.40 miles from site 16 (105.9), Turned south on Saturn Rd.
- Site 18** - 0.20 miles from site 17 (106.1), Fire on east, unburned on west
- Site 19** - 0.30 miles from site 18 (106.4), Rd splits, took west split, burned to east, unburned to west (hot fire)
- Site 20** - 0.25 miles from site 19 (106.65), End of Rd, goes into baygall area, really wet, turned around
- Site 21** - 0.70 miles from site 20 (107.35), Back to Deep Creek Rd, headed west
- Site 22** - 0.45 miles from site 21 (107.8), Wildfire on south side begins
- Site 23** - 0.10 miles from site 22 (107.9), Bee and Deep Creek
- Site 24** - 0.10 miles from site 23 (108), Wildfire still on south side, hard to tell whether it was a Rx or wildfire
- Site 25** - 0.20 miles from site 24 (108.2), Tram Rd and Deep Creek, stayed on Deep Creek, Tram marks western edge of wildfire
- Site 26** - 0.50 miles from site 25 (108.7), most of this forest is slash pine plantation with heavy fuels and unburned
- Site 27** - 1 mile from site 26 (109.7), Rd to north, still same forest type
- Site 28** - 0.10 miles from site 27 (109.8), Fire break to south
- Site 29** - 0.90 miles from site 28 (110.7), Rd to south (west Rd?)
- Site 30** - 0.10 miles from site 29 (110.8), Check station to Northeast
- Site 31** - 0.10 miles from site 30 (110.9), Wildfire to north, lots of marked timber, Rd to south here, not from 1998, no wiregrass flow.
- Site 32** - 0.20 miles from site 31 (111.1), Rd to north, still in area that has been burned, but doesn't seem like last year's fire
- Site 33** - 0.10 miles from site 32 (111.2), This area looks more like wildfire, 1998 fire, walked this area, very wet flat.
- Site 34** - 0.10 miles from site 33 (111.3), Turned west on fire break/logging Rd, logged area to north, wildfire to south
- Site 35** - 0.10 miles from site 34 (111.4), Logged to north, burn to south, wet flats, and cypress dome to north
- Site 36** - 0.20 miles from site 35 (111.6), End of Rd, big puddle, cleared on north, low intensity burn to south

#### **7/26/99 Buck Lake Conservation Area**

- Site 1** - 205.5 first gate at Hwy 46
- Site 2** - 0.90 miles from site 1 (206.4), Scrub area, but wet, came back thick with palmetto Sandy soil.
- Site 3** - 0.50 miles from site 2 (206.9), Rd to east, took and followed along burned area to south
- Site 4** - 0.10 miles from site 3 (207.0), Rd splits, took left fork and continued east, this Rd goes along burned out scrubby areas to north and South-sand pine.
- Site 5** - ?, Rd. off to left- stayed on main Rd
- Site 6** - 207.2, Begin restoration site.
- Site 7** - 0.10 miles from site 6 (207.3), Rd to left, palmetto, scrubby flat that has been recently burned to right.
- Site 8** - 0.30 miles from site 7 (207.6), End of restoration area

- Site 9** - 0.10 miles from site 8 (207.7), East gate (I went out this gate once before), lots of scrub, turned around
- Site 10** - 0.20 miles from site 9 (207.9), Back at Restoration site
- Site 11** - 0.70 miles from site 10 (208.6), Back at main Powerline Rd, turned around, towards savanna area
- Site 12** - 0.10 miles from site 11 (208.7), Took right fork into savanna burned
- Site 13** - 0.10 miles from site 12 (208.8), Along loop.
- Site 14** - 0.10 miles from site 13 (208.9), Burned pine, palmetto area
- Site 15** - 0.10 miles from site 14 (209.0), Pond pine burned area.
- Site 16** - 0.30 miles from site 15 (209.3), Buck Lake, lots of dead pines, good wire grass area, split in Rd, stayed on main Rd, cabbage hammock.
- Site 17** - 0.40 miles from site 16 (209.7), *Pluchea foetida*, *Dalea*, *Conyza*
- Site 18** - 0.10 miles from site 17 (209.8), Scrubby flat- burned, check out purple stemmed plant later next visit
- Site 19** - 0.10 miles from site 18 (209.9), Scrubby flat.
- Site 20** - 0.10 miles from site 19 (210.0), Longleaf pine/wiregrass savanna.
- Site 21** - 0.15 miles from site 20 (210.15), *Asclepias feayi* Check photo- not collected, Also *Licania michauxii*, (oak thing) check notes with Pat, This area marked with orange flag
- Site 22** - 0.05 miles from site 21 (210.2), Enter back end of "restoration" site, Photos taken of restoration site
- Site 23** - 0.10 miles from site 22 (210.3), Back at main Rd
- Site 24** - 0.40 miles from site 23 (210.7), *Chrysopsis mariana*, *Ludwigia suffruticosa*
- Site 25** - 0.40 miles from site 24 (211.1), Back at Powerline Rd, turned south to gate
- Site 26** - 0.20 miles from site 25 (211.3), *Penstemon* in grassy roadside with panic grass.

#### 7/27/99 Seminole Ranch Conservation Area

- Site 1** - 0.1 mile, From gate, parked and walked along Rd, low intensity fire, Turned around, too boggy

#### 7/27/99 Buck Lake Conservation Area

- Site 1** - 356.0, Powerline Rd and Main Trail Rd. that runs east, west (I usually turn west here, but now I am turning east) White blazed Trail
- Site 2** - 0.10 miles from site 1 (356.1), Split in Rd, took right fork which heads North west into burned pine/palmetto area- red marked tree, Rd to west leads to Subdivision Rd. This area is burned, unlogged, scrubby flatwoods of deep sands. There were heavy fuels but now burned back- needs more burning
- Site 3** - 0.10 miles from site 2 (356.2), Still scrubby flat.
- Site 4** - 0.20 miles from site 3 (356.4), *Cladium* marsh to right, still beautiful scrubby flat to left Stopped at *Carphephorus carnosus*, no *V. corymbosum*! Basal leaves narrow, *Eupatorium albidum*
- Site 5** - 0.05 miles from site 4 (356.45), *Liatris* sp.
- Site 6** - 0.25 miles from site 5 (356.7), Road ends and splits into two directions, left and right, took left road.
- Site 7** - 0.30 miles from site 6 (357.0), Rd to left stayed on main Rd.
- Site 8** - 0.30 miles from site 7 (357.3), Crossed puddle seen last time. Patch of large *Solidago* things, right here, need to stop and check next time, this stop is right before marsh.
- Site 9** - 0.10 miles from site 8 (357.4), This road crossed the marsh headed towards other gate, here the road forks, took left fork back into cabbage palm hammock, *Asclepias lanceolata*
- Site 10** - 0.20 miles from site 9 (357.6), Palm hammock burned.
- Site 11** - 0.20 miles from site 10 (357.8), *Euthamia*.
- Site 12** - 0.10 miles from site 11 (357.9), Road splits, took left split
- Site 13** - 0.10 miles from site 12 (358), *Sabatia*.
- Site 14** - 0.20 miles from site 13 (358.2), Palm/grass/palmetto, Indian grass flowering
- Site 15** - 0.30 miles from site 14 (358.5), Out of palm hammock, back in flatwoods, *Xyris*-big flowered in pm about 0.75m tall.
- Site 16** - 0.10 miles from site 15 (358.6), Road splits in to two roads, headed back to east towards gate, rained out, *Lachnanthes*, Wet flat to south, wet depression to left (north?) *Ericaulon*.
- Site 17** - 5.5 miles from site 16 (364.1), *Pteroglossopsis* on Gate Entrance Rd. in seed, right before road turns to east from Hwy 46 on right.

#### 7/28/99 Lake Woodruff NWR, Jones Island

- Site 1** - 440.7 , Picked up *Utricularia foliosa* in ditch along west side of Rd to impoundment #2? Close to entrance of Jones Island from Tower, marsh plants.
- Site 2** - 0.20 miles from site 1 (440.9), Enter Jones Island from Tower Rd.
- Site 3** - 0.10 miles from site 2 (441.0), Palm hammock- old fire break to south.
- Site 4** - 0.05 miles from site 3 (441.05), Begin pine/palmetto, High fuels, trees mature, needs burning, trees bedded.
- Site 5** - 0.05 miles from site 4 (441.1), Rds to left, and right, stayed on main Rd, *Lachnanthes*  
*Vitis shuttleworthii*
- Site 6** - 0.10 miles from site 5 (441.2), Wet flat area
- Site 7** - 0.05 miles from site 6 (441.25), Fire break, rds to north and south, *Eupatorium albidum*. in Rd and *Lachnanthes*, walked to south Rd.
- Site 8** - 0.15 miles from site 7 (441.4), Rd to south, stayed straight toward pontoon landing, *Cyperus esculentus*.
- Site 9** - 0.30 miles from site 8 (441.7), Moved into more mature pine with thick woody understory Sweetgum, laurel oak, *Pinus palustris*, lots of vertical fuels here.
- Site 10** - 0.10 miles from site 9 (441.8), Walked palm pine hammock to south to marsh, cypress hammock, *Vitis aestivalis*, Nice area, mature stand fern, turned towards Pontoon Landing.
- Site 11** - 0.40 miles from site 10 (442.2), Pontoon Landing, turned around.
- Site 12** - 0.40 miles from site 11 (442.6), Back at main road, white lily pad.
- Site 13** - Marsh Rd and Lake Rds.