

Fall 2015 Meeting of the Natural Area Advisory Committee

17 September 2015, NATL Academic Pavilion, 12:03-1:07pm

In attendance:

Morgan Byron (NATL Graduate TA)
Ethan Carter (NATL Graduate TA)
Jaret Daniels (FLMNH)
Jennifer Gillett-Kaufman (Entomology and Nematology)
Linda Jones, School of Teaching and Learning
Alex LoCastro (NATL Undergraduate TA)
Matt Moore (Entomology and Nematology Student Organization)
Lary Reeves (NATL Vice Chair)
Scott Robinson (FLMNH)
Scott Sager (SFRC)
Sean Sharp (Wetlands Club)
Erick Smith (Friend of NATL)
Matthew Smith (Plant Pathology)
Thomas Walker (Friend of NATL)
Emma Weeks (NATL Chair)

12:03 PM

Introductions (Emma)

Emma began the meeting by thanking all NAAC members for coming and everyone introduced themselves.

1. Budget FY 2015 update- fiscal report on adherence to and/or deviation from 2014-2015 spending plan (Appendix 1) (Lary)

Lary explained that the fiscal plan has been on track for 2014-2015 spending to date. In fact, we are under budget for miscellaneous expenses and a new portion of money for invasive species management has been freed up now that Ethan Carter is being paid by a TA stipend.

The Committee approved these surplus funds being used for continued Upland Pine restoration, including a burn that will encompass every UP Block. Additional funds will be allocated to invasive species control.

2. Preliminary draft of 2015-2016 spending plan for approval at Fall meeting (Appendix 2) (Lary)

Lary described the spending plan for next year, saying that there are to be no major changes. The funds set aside for invasive species management that are not being used currently are to stay in the budget, as Ethan Carter will soon graduate and someone else will need to fill this position. Any surplus is to be used for Upland Pine restoration and the 2015-2016 spending plan was altered to reflect this.

3. Updates on possible capital improvements and funding sources (Appendix 3) (Emma)

A recent user survey carried out by Emma and TA, Morgan Byron, asked NATL users about what kind of changes or improvements they would like to see. The feedback from this survey altered the priorities for long range NATL wish list items, with lots of interest going towards enhancing the NATL pavilion – specifically providing lockers and teaching tools, like a projector screen. Jennifer Gillett-Kaufman suggested that some of these NATL wish list items be paid for out of carryover money from the budget plan, but Emma was not sure if this was possible or necessary. Emma went on to explain that she has had some leads for funding the abovementioned items and will update the NAAC when she knows more.

In regards to Section B (Instituting remote access (and security) and real-time online interaction with NATL), the nature-viewing webcam is installed and the online live feed is currently being developed. A second site for another nature-viewing camera is being considered as the barn owl box remains owl-less. NAAC members are encouraged to suggest location ideas for the second camera.

In collaboration with the School of Forest Resource and Conservation (SFRC), the NATL Operations Committee is discussing the implementation of several demonstration plots in the Restricted Area Upland Pine. Depending on the needs of SFRC and other users plots could include those that have been managed with burning, herbicides, mowing and combinations thereof, as well as different planting techniques.

4. People Counter Summer (Appendix 4)

Ethan described the process by which NATL counts its visitors. There have been some technical difficulties with the TrailMaster devices, but lack of data has been accounted for by averaging the counts from previous years.

5. Volunteer Summary (Appendix 5)

Ethan explained the graph and table shown in Appendix 5, noting that the Fall 2015 hours will increase once all of the volunteers hours are recorded. An additional volunteer event, Gator Plunge, was scheduled for the coming Saturday and those hours will be reflected in the Spring 2016 total.

6. Minigrant update and 2016 planning

Morgan gave an update on each of the four NATL minigrant projects approved by the NAAC in November 2014. All four projects are nearly complete and all final reports have been submitted. Descriptions of all four projects are below:

1. The first project was proposed by ENSO, the Entomology and Nematology Student Organization, and included the installation of a permanent structure for nighttime insect

collecting. This structure is located where the SEEP and Old-Field Plot B meet. Special permission is needed to use this structure because NATL is closed after dark and a key is required to access the nearby electrical outlet (installed as part of the WiFi installation). So far, it has been utilized by ENSO members, Principles of Entomology (ENY 3005/5006) and Insect Classification (ENY 4161/6166) students, participants in STEAMquest (UF summer program for high school students interested in STEM and the arts), and the undergraduate Entomology Club. The final report was submitted on August 19, 2015. A permanent sign describing the construction and use of the light trap is underway.

2. Another minigrant project was undertaken by Haleigh Ray and Ashley Egelie, graduate students in the Entomology and Nematology Department. Their project involves the installation of native solitary bee and wasp habitats within NATL as part of UF Native Buzz, a citizen science project that is being undertaken by the PIs and Dr. Jennifer Gillett-Kaufman. These nesting structures along with signs indicating their purpose can be found along the Old-Field trails and into the Hammock.
3. A third minigrant project, proposed by Gabe Somarriba, an undergraduate in the College of Agricultural and Life Sciences, attempted to add to NATL's list of aquatic biota in NATL's wetlands and improve the look and functionality of the associated webpage. Gabe recorded a total of six species (four in NATL East, two in NATL West), two of which are non-native (*Pimephales promelas*, the fathead minnow, and *Xiphophorus maculatus*, the southern platyfish). Gabe photographed individuals of each species for the NATL website's fish page. His final report was submitted on August 25, 2015 and [the associated webpage](#) on the NATL site is complete. An educational sign to be placed in NATL is still under construction.
4. The fourth 2014-2015 minigrant project was a survey of lichens by Barry Kaminsky, a Masters student in Biology whose research is focused on lichens. Barry collected more than 30 common lichen species from NATL, photographed, and identified them. From this information, he created a key for identifying lichen species in Florida and contributed information and pictures for [an accompanying webpage](#) on the NATL site. Barry's final report was submitted on August 5, 2015.

It is time to begin selecting a new round of minigrant recipients for the 2015-2016 cycle! Please encourage any interested students to apply, the proposal form will be available [on the NATL website](#) and applicants must submit their proposals to the NATL Chair by **November 2, 2015**.

7. [Facebook](#) and [Twitter](#) Updates

NATL's Facebook page has 954 Likes and our Twitter page has 868 Followers. Since the last NAAC meeting in September, we have gained 87 Facebook Likes and 130 followers on Twitter!

Recently, creation of a NATL Instagram account was approved and it currently has 147 followers.

If you use social media, please feel free to follow NATL on [Facebook](#), [Twitter](#), and [Instagram](#). The NATL Operations Committee make an effort to post every day of the week about what is going on in NATL, usually with pictures. We also love posting about visitors using NATL, so please share any pictures or observations with us on any of these social media accounts.

8. Control of invasive exotic plants in NATL (Appendix 6)

Ethan detailed his efforts for eliminating invasive species from NATL, supplemented by the information in the table in Appendix 5. This table separates the known invasive plants in NATL into three categories: main threats, lesser threats, and those that have been eradicated. According to Ethan, the situation is much the same as it has been in the past, and the focus this semester has been on treating mimosa and cogongrass, in particular. Linda Jones inquired as to the very large number in the 2015 column for mimosa (*Albizia julibrissin*) and Ethan explained that that value reflects the number of trees he has treated since the last NAAC meeting. The reason the number is so comparatively small in preceding years was due to prioritizing other species for attempted eradication.

9. Nature trail update, boardwalk concerns (Alex)

Alex talked about his efforts and the efforts of a new volunteer, Hector Lacera, to maintain NATL's trails, keeping them trimmed to 80 inches high (in compliance with the Americans with Disabilities Act) and free of debris. He mentioned the restart preparation of Old field Plot B, which will be tilled and restarted in 2020. So far, TAs have begun cutting down the trees in this plot. Last October, the northeast portion of Old-Field Plot B was successfully restarted, followed by the southwest portion of Old-Field Plot B in February 2015. The northeast portion of Plot B is set to be restarted Spring 2016, with the southwest portion to be restarted in Fall 2016.

Due to heavy rains, the SEEP Boardwalk has flooded twice since the last meeting (first at the end of June for four days, most recently for over a month this summer). Mark Clark and the Wetlands Club have agreed to assess the damage to the boards once the boardwalk has sufficiently dried out and replace them if necessary.

10. WiFi and webcams

In the fall of 2013, NATL was awarded a grant from the UF Student Government Technology Fee. Five WiFi stations in the NATL Public Area became active in June 2014. In the summer of 2015 the first wildlife camera was installed and is currently filming the comings and goings in the SEEP pond. The next step is to add a page to the NATL website that receives the live feed from the camera. The grant provided funding for a second camera. The initial plan was to place the camera in the owl box. However, the owl box has been unoccupied since its installation so the camera may provide more exciting viewing in another location. Emma and Lary asked the Committee for suggestions.

Jennifer suggested a second camera in the SEEP, possibly near the ENSO light trap. Scott Sager said perhaps the camera would be useful somewhere near the Cultural Plaza for recording visitors. Jaret Daniels was not ready to abandon the idea of nest boxes, and suggested we try again with some new bird boxes. When he mentioned this, Jennifer suggested Katie Sieving's bluebird boxes as a good target for the camera, as these have routinely been occupied by bluebirds in the past. Erick Smith thought raptor boxes might be a good idea, prompting Jennifer to mention a potential platform for osprey. Lary offered that maybe barred owls would be a better bet than barn owls, and Jaret said he knows they are present near Cultural Plaza. Scott Sager, along the same lines, suggested a bat box. At this point Lary introduced the idea of a moveable webcam – so that visitors to the site could view bluebirds in the spring and barred owls later in the year, for example. Jennifer said this was probably possible and that there was still money from the grant to explore it further. Linda Jones suggested installing a camera to capture the activity of nocturnal wildlife in NATL, which was widely regarded as an interesting prospect! The NATL Operations Committee are planning to submit a proposal to Jennifer Gillett-Kaufman (the PI of the grant) for the spending of the remaining funds.

12. Restoration of Upland Pine (Appendix 7)

Enhancement of UP infrastructure

Emma told NAAC that Tom Walker will be officially retiring, but plans to keep us on track in terms of Upland Pine Restoration as a Friend of NATL. Before his retirement, Tom Walker was sure to implement the ¼-gridblock (25x25m blocks within each 50mx50m NATL grid block) system, coordinating with Morgan Byron to make the GIS maps match the gridstakes out in NATL.

Tom Walker sent out a document to SFRC faculty and other academic users of NATL to listing the enhancements to encourage future use and management.

Other improvements to Blocks C, D, and E (in the Restricted Area) include the planting of ~3800 plugs of burnable grasses (2000 wiregrass, 1400 lopsided Indiangrass, 175 Elliott's lovegrass, 175 purple lovegrass, and 50 Muhly grass) by members of the NATL Operations Committee and a few volunteers. Ken Prestwich, Ethan Carter and Tom Walker worked to remove various invasive species and problem plants, making the gridlines easily walkable.

Future Plans for Upland Pine Restoration

Emma discussed future plans for maintaining and restoring the Upland Pine blocks, and they are as follows:

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Continue to restore public area blocks; includes UP Nature Trail using prescribed fire and use the area to educate the public and the academic community about the ecosystem's former prevalence and the importance of fire in restoring and maintaining upland pine areas.

(Being in the area of NATL from which the public is excluded, these restricted area blocks need to be managed to benefit those who plan to use them for projects that make the best academic use of UF's three managed blocks of longleaf pine that are on the main campus and in different stages of restoration.

2014-2015 Prescribed Burns

Blocks A & B were last burned on 9 April 2014 by Tom Workman and crews from Austin Cary and the Ordway-Swisher Biological Station. A burn planned for April, May, or early June 2015 could not be scheduled.

Blocks C, D & E: were last burned on 12 Feb 2015 by Tom Workman, with help from NATL volunteers and Leda Kobziar and her students.

NATL UP Future Plans

Annual spring burns should be resumed in 2016, with the goal to burn every 2 years once restored. SFRC (Michael Andreu and Scott Sager) will advise the NATL chair on prescribed burn scheduling, will work with a NATL TA and the NATL chair to coordinate the burns, including contacting PPD to clear firebreaks and contacting all necessary parties. If available and willing, Tom Workman will be hired to burn Blocks A-E on a suitable burn-day to reduce the need to burn on two separate days (previous burns were separated into the public and restricted areas; A and B followed by C-E) and the chance that conditions are not optimal.

As described above, the NATL Operations Committee has been discussing the implementation of several demonstration plots in the Restricted Area Upland Pine. Depending on the needs of SFRC and other users plots could include those that have been managed with burning, herbicides, mowing and combinations thereof, as well as different planting techniques.

In the public area continue control of invasive alien plants, with cogongrass and Guinea grass (*Panicum maximum*) currently the most threatening. Plan and initiate management of cabbage palm in keeping with the goal of educating the public about the unexpected problem.

In the restricted area keep gridlines walkable. Control invasive exotics, especially Guinea grass. Cut and limb unwanted trees and have PPD remove the resulting wood. Cut and kill unwanted woody plants in the shrub layer. Reduce inappropriately dense native vines, especially *Smilax* spp. and muscadine grape.

Scott Sager talked briefly about experimental management ideas for the Restricted Area pine blocks, in response to a question from Erick Smith asking what these blocks will be used for if not for burn training. Scott explained that these plots would be of interest to students, used in classes, or to small private landowners that manage their own property. Jennifer Gillett Kaufman said this would be especially useful for people who cannot burn their land, due to location. These demonstration plots will show mowing and chemical treatments as substitutes for burning, as well as the differences in high and low intensity restoration. These methods may also be useful in creating flexibility for keeping fire away from 34th street, suggested Scott Sager. The Committee was in favor of these types of plots being implemented. Jennifer Gillett Kaufman remarked that temporary signs should be put in place during the experiments.

13. NATL Campus Visibility

Emma told the NAAC about the recent success the Operations Committee has had increasing NATL's visibility among new and existing students and faculty. NATL is now represented fully on the print map and online campus maps, and it has been added as a Place of Interest on the online map. Morgan is working on adding directions via various methods of transportation to the NATL website. Signs reading "NATL this way >" are wanted in places near main intersections.

Jaret also mentioned that UF Student Government has alleviated the cost of FLMNH entry for students and that student capture rate has greatly increased. In light of this, he suggested NATL attempt to advertise within the Museum more thoroughly (there is already mention of NATL on the TV slideshow above the front desk, and brochures are also available).

14. Call for volunteers/potential TAs

Emma encouraged the NAAC to recommend any motivated students to come and volunteer for NATL on a regular basis. She mentioned that there is both indoor and outdoor work to be done, so selection is not limited to only those who enjoy being outside. In the past, TA positions have been filled by worthwhile volunteers who showed a legitimate interest in helping NATL.

ENSO update (Matt Moore)

Matt expressed interest in an ENSO volunteer day in NATL. He said that ENSO members are only eligible to receive travel grants if they meet a service requirement and that NATL would be a great place for these students to rack up volunteer hours. The Operations Committee agreed.

Next NAAC meeting date and time

The date and time of **Noon, April 14, 2016** was suggested in the agenda and approved at the meeting. If you know of a conflict, please let Emma know as soon as you can.

1:07 PM Meeting Adjourns

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Appendix 1: Fiscal Report for FY 2014-15

NATL Fiscal Plan for FY 2014-15		[reformatted here]	Final Fiscal Report for FY 2014-15	
Approved by NAAC 4 September 2014				
Funds available for 2014-15, excluding stipends for Graduate TAs*.				
Brought forward from 2012-13		\$507	\$507	
Projected income for 2014-15				
Provost	\$ 6,000		\$ 6,000	
NATL endowment	\$ 4,625		\$ 5,003	Higher than projected
Sum	\$ 10,625		\$ 11,003	
Grand Total		\$ 11,132	\$ 11,510	
Spending plan for 2014-15				
Personnel				
Undergraduate TA	\$ 4,322		\$ 3,964	Experienced undergrad (Alex Locastro)
Control of invasives	\$ 1,320		\$ 96	To be carried forward for UP burns, invasive sp. specialist
Sum	\$ 5,642		\$ 4,060	
Other spending				
Miscellaneous expenses	\$ 2,500		\$ 2,491	
Upland pine restoration	\$ 1,000		\$ 1,039	
2000 NT fliers	\$ 400		\$ 400	
2 minigrants @\$500 each	\$ 1,000		\$ 1,086	Additional, lower-cost minigrant funded
Sum	\$ 4,900		\$ 5,016	
Grand Total		\$ 10,542	\$ 9,076	
To be carried forward		\$ 590	\$ 2,434	
Online donations to NATL (implemented March 2012)		\$ 921	921	
* The Provost and the CALS Dean will each pay the stipend for a NATL Graduate Teaching Assistant				

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Appendix 2: Fiscal Plan for 2015-16

Initial NATL Fiscal Plan for FY 2015-16				Comments
Final version to be approved at Fall meeting				
Funds available for 2015-16, excluding stipends for Graduate TAs*.				
Brought forward from 2014-15		2,434		
Projected income for 2015-16				
Provost	6,000			Received
NATL endowment	4,625			Assumes no change
Sum		10,625		
Grand Total			\$13,059	
Spending plan for 2015-16				
Personnel (OPS)				
Undergraduate TAs	4,322			Experienced help, 8 hrs/week (does most of routine maintenance of nature trails)
Control of invasives	1,500			Herbicides and invasive specialist, 2 hrs/week
Sum		5,822		
Other Expenses				
Miscellaneous expenses	2,500			
Upland pine restoration	3,000			Increased by \$2000 to increase burn coverage
2000 NT fliers	400			Based on quote
2 minigrants @\$500 each	1,000			Program attracts student proposals to fulfill NATL needs
Sum		6,900		
Grand Total			\$12,722	
To be carried forward			\$337	
NATL improvement fund (from online donations)				
Online donations to NATL (implemented March 2012)	\$	921		
* The Provost and the CALS Dean will each pay the stipend for a NATL Graduate Teaching Assistant				

Appendix 3: Capital Improvements Updated Fall 2015 Report

The following items were discussed and compiled by the NATL Operations Committee and modified based on a week's discussion by NAAC members. Some items have an associated web link that is an example of the item described.

Long Range NATL Wish List: 2011-2021 Vision Plan

We recognize that NATL already has tremendous value to the local UF community. This Vision Plan seeks to strengthen and enhance these indigenous values of NATL and, in addition, provide mechanisms for bringing the educational values of NATL to an unlimited online environmental community of users. We present the plan in the form of a two-part outline of infrastructure and other developments, focusing on both in-person and online users of NATL.

This list is not static; additional items may be added to the list. Items will be removed from the list if more than half of the NAAC members feel that the item would not enhance the use of NATL. Funding for items could come from donations to the UFF on behalf of NATL or by writing specific items into future grant proposals.

A. Enhancing in-person access

1. ~~Bike parking areas at each primary NATL entrance. Completed 2012.~~
2. ~~Extend 110v AC to the pavilion and the NATL shed (two weather proof duplex outlets at the pavilion and hook up the wiring that came with the prefab storage shed). Completed 2013.~~
3. Extend potable water service to the pavilion area to provide access to water for drinking, bottle filling, hand washing, and class-related low-volume uses. This could include a sink and associated drainboard if restraints on cost, design, and context are met.
4. Two or more locking cupboards for class use (to reduce the risk associated with students leaving valuables unattended in the pavilion during class time). (Design and placement not yet considered.)
5. Natural Area Park water fountain. (Design and placement not yet considered.)
6. Additional seating areas at NATL Park and along NATL trails. (If the UF Foundation approves the plan, donors might pay enough for benches with commemorative inscriptions to fund other items on this wish list). [LINK](#)
7. Add a classroom and/or lab building to facilitate NATL use. To avoid using land in the NATL-west Conservation Area, the building might best be situated on an out-parcel south of the pavilion. (A representative of the UF Foundation believes NATL might attract a donation of \$1 million or more. Having a plan for using such a donation might help the donor decide to make it. An alternative plan for using such a donation would be to set up an endowment for the benefit of NATL.)
8. ~~Improve access to NATL nature trails from Cultural Plaza for those with disabilities. New boardwalk/ramp from Cultural Plaza entrance, curb dropped and all trails trimmed to 80 inches in height to be compliant with the Americans with Disabilities Act (ADA).~~

~~(Trimming has been initiated and we are awaiting a quote from a contractor for the boardwalk/ramp.) Completed 2015.~~

B. Instituting remote access (and security) and real-time online interaction with NATL

- ~~1. Update the look of the NATL website while improving its usefulness as a distance natural laboratory. This change will maintain the historical information on the website now; it will not be lost in the change—just repackaged. Completed 2012. Website additions could include a NATL "virtual collection"/species inventory with photos and audio recordings of sounds such as resident bird, frog and insect calls for groups interested in taking virtual field trips. Completed 2013.~~
- ~~2. Complete and enhance Wi-Fi coverage in NATL. With this, we could lead live tours of NATL using camera abilities built into iPads and other electronic devices. This would allow teachers and students the ability to direct the tour by asking their NATL tour guide to zoom in on subjects of interest. This would be a wonderful opportunity for our students in the ecotourism track to lead tours for students around the world. Completed 2014.~~
- ~~3. Install webcams in NATL at carefully selected venues. These cameras could be used by researchers studying animal behavior in NATL as well as giving access to NATL to teachers in their classrooms. Example of broadcasts: [LINK](#) Completed 2015~~
4. In partnership with FLMNH, develop a program using an interactive whiteboard (e.g., SMART board) to use digital material from NATL to involve K-12 students in learning about ecological concepts and problems. Including grade-level specific, standards-based curriculum materials (field investigation activities) that can be implemented as part of school field trips or summer enrichment programs. Make available as downloadable files for use by home schooled children, scout groups and others.
5. Prepare pre-recorded guided tours that will be filmed and then available online for those that cannot visit NATL in person. Offer live guided tours for schools and other groups of people that would not be able to visit NATL in person due to distance from the site or disability.

C. Enhancing the research and teaching usage of NATL

In collaboration with the School of Forest Resource and Conservation (SFRC), the NATL Operations Committee is discussing the implementation of several demonstration plots in the Restricted Area Upland Pine. Depending on the needs of SFRC and other users plots could include those that have been managed with burning, herbicides, mowing and combinations thereof, as well as different planting techniques.

Establish a grant program costing approximately \$10,000 a year providing small grants (\$500-\$5,000 grants) to foster data collection, proposal submissions and distance curriculum development utilizing NATL. Distance curriculum developed using seed grant funding would be made freely available on the NATL website. \$1,000 per year earmarked for a grant that would support one or more citizen science projects in NATL. Citizen Science projects could fund some NATL specific ideas as well as support the partnership of NATL with national initiatives.

Appendix 4: Three TrailMaster units are installed in NATL, one at the Academic, Cultural Plaza and Natural Area Park Entrances, respectively. These units measure NATL usage by counting the number of people passing through each entrance. The Cultural Plaza Entrance has had a TrailMaster installed since July 2010, however initial technical difficulties yielded unreliable data in the first few months. Subsequently, two additional units were installed at the Academic Entrance (June 2011) and Natural Area Park Entrance (April 2012). Figures 1 and 2 summarize information collected by the TrailMaster units. NATL visitors are counted twice (as they enter and exit), so all counts are divided by two to estimate the number of visitors NATL receives.

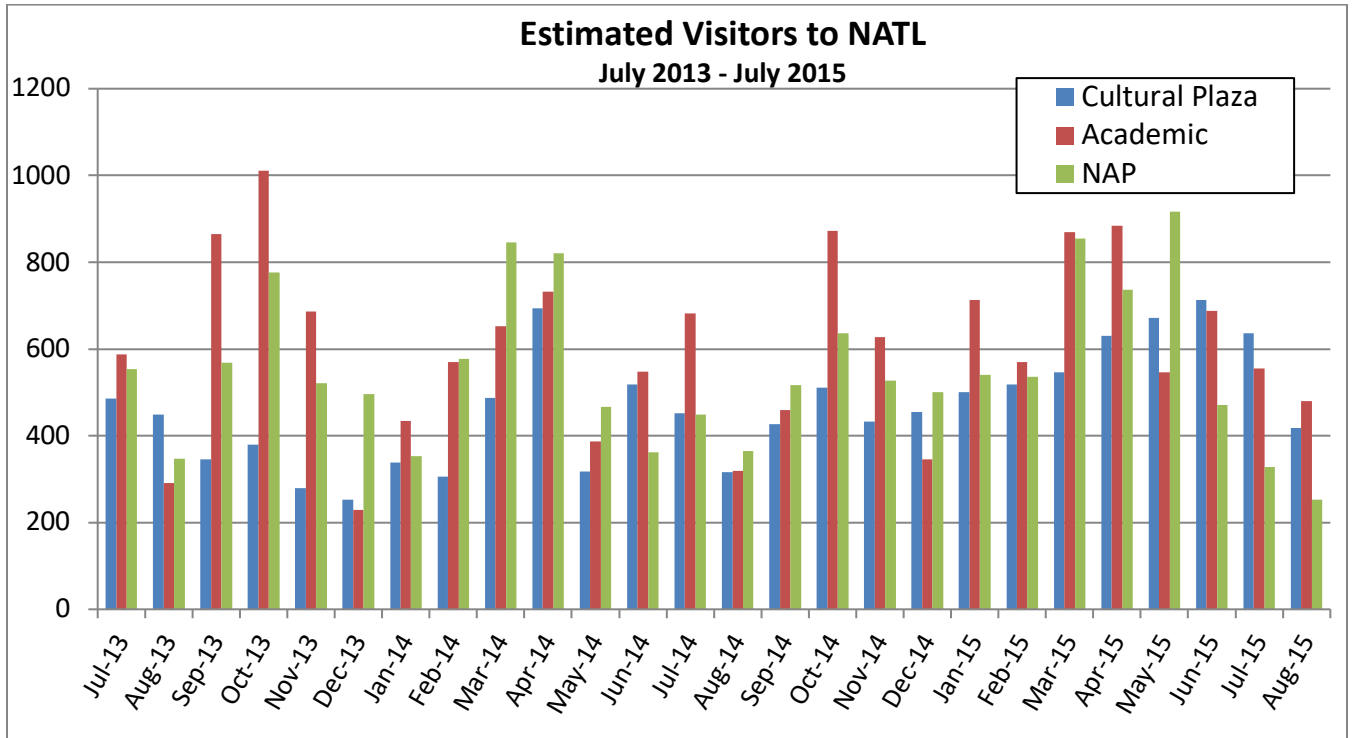


Figure 1. Summary of TrailMaster counts from July 2013 to July 2015 at the Cultural Plaza, Academic and NAP entrances. All numbers are TrailMaster counts/2 because users are counted twice, as they enter and exit. Values on this chart can be found in Table 1, below.

Table 1. Summary of NATL usage estimates via TrailMaster counts. All numbers are TrailMaster counts/2 because users are counted twice, as they enter and exit. *Technical difficulties, possibly due to the laser sensitivity setting, resulted in no data. Number provided is an average of the previous and subsequent years' counts.

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		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
CP	2010												323.5	323.5	
	2011	465	456.5	527.5	636	427.5	421.5	686	526.5	282.5	365.5	329.5	299.5	5423.5	
	2012	355.5	411.5	529	1531.5*	312	477.5	521	582	373	696.5	705.5	543	7038	
	2013	673	795.5	428	443	315*	498*	486*	449*	346	379.5	279	253	5345	
	2014	338.5	305.5	487*	694	318	518.5	451	316	427.5	511.5	432	454.5	5254	
	2015	500.5	518.5	546	630	671	713.5	636						4215.5	
AE	2011						676	532.5	548.5	834.5	915.5	557	345.5	4409.5	
	2012	689	804	724.5	1174.5*	573	719.5	501.5	608.5	1090	954.5	621.5*	248.5	8709	
	2013	572	656	882.5	595	352	344	587.5	291.5	864	1010.5	686	229	7070	
	2014	434.5	569.5	653	732	387.5	547.5	681.5	319.5	459	873	627	346	6630	
	2015	712.5	570	869	884.5	546.5	687.5	554.5						4824.5	
	NAP	2012				639	471	471.5	338	356*	676.5	549	375	330.5	4206.5
2013		533.5	605	838	717.5	455.5	488	553	347	568.5	776	521.5	495.5	6899	
2014		353	577.5	846*	820.5	467	362.5	448.5	365	517.5	636.5	527	501	6422	
2015		540	535.5	854	736	916	470.5	327.5						4379.5	
															Grand Total

**Appendix 5:
Volunteer summary**

Since the last NAAC meeting in April 2015, NATL has hosted a number of volunteer events. Volunteers at these events worked planting native grasses, collecting trash, cleaning signs, trimming trails and fences. These events brought 44 volunteers who worked a total of 92.25 hours. In addition, Tom Walker, Ken Prestwich, and Hector Lacera collectively donated 475 hours of their time to NATL.

Table 2 Volunteer Events

May	June	July
5/16/15 UF Center for Leadership and Service volunteers help clean signs, pick up trash, trim trails, and the NATL East boardwalk (23 people x 1.5 hrs) 34.5 hrs	6/8,6/10,6/17,6/18, 6/19 /15 Operations Committee and volunteers plant native grasses 17.75 hrs	7/25/15 Summer Plunge volunteers clean signs, pick up trash, and trim trails and corral fence (16 people x 2.5 hrs) 40 hrs

Table 3 Volunteer Hours September 2013-April 2014

Miscellaneous Volunteer Projects	82.5 hours
Tom Walker	254 hours
Ken Prestwich	26.5 hours
Hector Lacera	112 hours
Total	475 hours

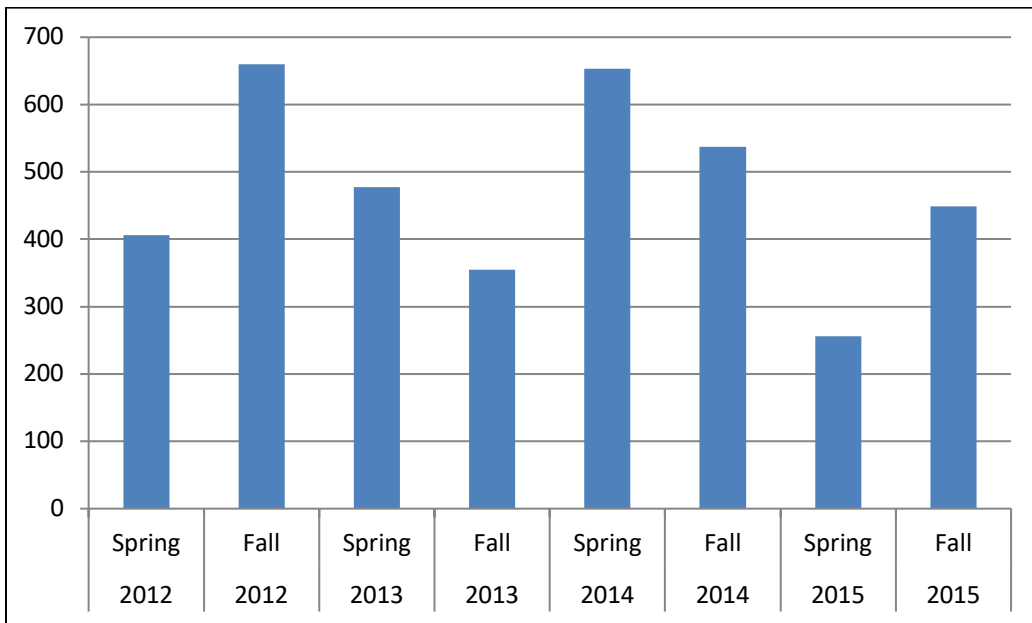


Figure 2 Volunteer Hours Reported at NAAC Meetings- Spring 2012-Date

Appendix 6: Control of invasive exotic plants in NATL

In 2012, Ethan and Tom Walker prepared a summary of efforts to control NATL’s invasive plants from 1994 to May 2012. [That summary](#) is currently on the web. Afterwards we reconsidered which species were the greatest threat to NATL and assigned the species of greatest concern to places in a [new classification](#) of NATL’s invasive plants. These are taken from a spreadsheet that has notes within certain cells to explain the details.

Table 4. Status of exotic plants in NATL 2010 to present.

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Status of Invasive exotic plants in NATL: 2010 to date			Plants or Patches Treated						
by Ethan Carter and Tom Walker (under construction)			Worst documented	2010	2011	2012	2013	2014	2015
Category									
Most threatening									
coral ardisia	Mature Plants	2009: >1200	316	81	5	7	2	(0)	
<i>Ardisia crenata</i>	juvenile plants	2009: >8400	ND	ND	ND	1366	2968	(0)	
cogangrass	patches treated	2005: >20	ND	17	10	7	5	(3)	
<i>Imperata cylindrica</i>									
skunkvine	Major patches treated	2005-07; 2009; 2012: 1	1	0	0	1	0	(0)	
<i>Paederia foetida</i>	Patch remnants treated	2014: 3	1	1	0	0	3	(0)	
cat's claw	new sites found	2006: 1	0	1	1	1	1	(0)	
<i>Macfadyena. unguis-cati</i>	sites treated	2011: 2	1	2	2	2	1	(1)	
mimosa	counted, treated trees	2011: 300	ND	366	78	13	10	(678)	
<i>Albizia julibrissin</i>									
air potato	Major patches treated	2009: 4	1	1	0	0	0	(0)	
<i>Dioscorea bulbifera</i>	Patch remnants treated	2010: 5	5	1	ND	2	0	(0)	
Japanese climbing fern	patches treated	2007: 2	1	3	7	4	0	(1)	
<i>Lygodium japonicum</i>									
Lesser threats									
camphortree	mature trees	2011: 7	ND	7	3	0	2	(0)	
<i>Cinnamomum camphora</i>	stems	2012: 31	ND	11	31	3	2	(4)	
white leadtree	mature trees	2000: 1	0	0	0	0	0	(0)	
<i>Leucaena leucocephala</i>	stems	2012: 43	ND	8	43	18	15	(0)	
silverthorn	mature shrubs	2012: 7	ND	ND	ND	7	1	(0)	
<i>Elaeagnus pungens</i>								(0)	
negundo chastetree	multistem clump	2011: 23	ND	23	2	0	0	(0)	
<i>Vitex negunda</i>									
paper mulberry	mature trees	2012: >30	ND	ND	>30	ND	47	(0)	
<i>Broussonetia papyrifera</i>	stems	2011: 19	ND	29	15	ND	480	(2)	
chinaberry tree	mature trees	2012: 5	ND	4	5	1	0	(0)	
<i>Melia azedarach</i>	stems	2011: 9	ND	9	0	0	0	(0)	
loquat	mature trees	2012: 3	ND	ND	3	1	0	(0)	
<i>Eriobotrya japonica</i>	stems	2012: 7	ND	ND	7	6	30	(0)	
arrowhead vine	Major patches treated	2006: 1	0	0	0	0	0	(0)	
<i>Syngonium podophyllum</i>	Patch remnants treated	2009: 3	3	3	3	3	3	(1)	
Chinese tallowtree	mature trees	2012: 7	ND	1	7	0	1	(0)	
<i>Sapium sebiferum</i>	stems	2011: 15	ND	15	7	2	0	(1)	
glossy privet	mature trees	2012: 10	ND	ND	10	2	0	(0)	
<i>Ligustrum lucidum</i>	stems	2012: 5	ND	ND	5	1	ND	(0)	
English ivy	Major patches treated	2012: 2	0	0	2	1	0	(0)	
<i>Hedera helix</i>	Patch remnants treated	2013: 2	0	0	0	2	3	(1)	
Japanese jasmine	Major patches treated	2012: 1	ND	ND	1	0	0	(0)	
<i>Jasimum mesnyi</i>	Patch remnants treated	2013: 1	ND	ND	0	1	1	(1)	
Asparagus Fern	Major Patches treated	2015: 1	ND	ND	ND	ND	ND	(1)	
<i>Asparagus setaceus</i>	Patch remnants treated								
Eradicated (more than three years without a sighting)									
elephant grass	active sites	1995: 2	0	0	0	0	0	(0)	
<i>Pennisetum purpureum</i>									

Status of Control of Invasive Plants in NATL

NATL has approximately 142 plants that are not native to Florida, but only about 25 of these are currently under strict surveillance because of their perceived potential to significantly alter NATL ecosystems. An invasive plant will naturalize on its own, and take over native ecosystems by choking out and outcompeting natives. FLEPPC (Florida Exotic Pest Plant Council) maintains a list of all invasive plants in Florida, ranking them as either category 1 or 2. Category 1 plants are the most lethal and displace native plants, disrupting ecosystems, while category 2 plants can spread but have not yet necessarily altered ecosystems severely enough to be categorized as 1.

At NATL, we use both mechanical and chemical techniques to control invasive plants. A few common invasive plants that you may recognize are mimosa, Chinese tallow and camphor tree. To date the only invasive plant eradicated from NATL was elephant grass, however all of our documented invasive plants have been severely diminished and are controlled. We define “eradicated” as being absent with no sightings in NATL for a minimum of 3 years. There are currently seven plants that have not been sighted in several months, with no known existing infestations awaiting treatment. The common names of these species are air potato, pindo palm, silverthorn, negundo chastetree, chinaberry, wandering Jew, and Japanese loquat. It is expected that they are no longer found in NATL, but have not yet reached the 3 year mark to be classified as eradicated. A large patch of Asparagus fern was also treated recently, and it is believed to have been the only location in NATL. Four of the remaining invasive species that cause the most concern are cogon grass, skunk vine, coral ardisia, and Japanese climbing fern, which are all category 1 (FLEPPC).

Top category 1 plants in NATL include cogon grass (*Imperata cylindrica*), coral ardisia (*Ardisia crenata*), cat's claw vine (*Macfadyena unguis-cati*), air potato (*Dioscorea bulbifera*), skunk vine (*Paederia foetida*), and Japanese climbing fern (*Lygodium japonicum*). Category 2 plants include but are not limited to paper mulberry (*Broussonetia papyrifera*), silverthorn (*Elaeagnus pungens*), and Chinaberry tree (*Melia azedarach*). More information about invasive plant management in NATL can be found on the NATL website (http://natl.ifas.ufl.edu/ecosystems/invasive_control.php).

NAAC Fall 2015 Meeting Minutes

Appendix 7: NAAC roster Fall 2015

NAAC roster						
The current version of the NAAC roster is at http://natl.ifas.ufl.edu/docs/NAACroster.xls						
Last name	First name	Representing	Email	Campus address	Phone (352-)	Notes
Byron	Morgan	NATL Graduate Teaching Assistant	maconn00@ufl.edu		727-808-6547	non-voting
Carter	Ethan	NATL Graduate Teaching Assistant	ethancarter@ufl.edu			non-voting
Clark	Mark	Soil and Water Science	clarkmw@ufl.edu	PO Box 110510	392-1804 ext. 319	
Daniels	Jaret	McGuire Center, FLMNH	jdaniels@flmnh.ufl.edu	PO Box 110620	273-2022	
Donohoe	Holly	Tourism, Recreation and Sport Management	hdonohoe@hhp.ufl.edu	PO Box 118208	294-1654	
Gillett-Kaufman	Jennifer	Entomology & Nematology Department	gillett@ufl.edu	PO Box 110620	273-3950	
Hansen de Chapman	Gail	Chair of Lakes, Vegetation, and Landscaping Com.	ghansen@ufl.edu			
Holland	Stephen	Tourism, Recreation and Sport Management	sholland@hhp.ufl.edu	PO Box 118208	294-1669	
Jones	Linda	School of Teaching and Learning	lcjones@coe.ufl.edu	PO Box 117048	392-0761 ext. 267.	
Lewis	Erik	Facilities Planning and Construction	etlewis@ufl.edu	PO Box 115050	273-4011	
LoCastro	Alex	NATL Undergraduate Teaching Assistant	alocastro@ufl.edu		407-405-4053	non-voting
Moore	Matthew	ENSO (Entomology & Nematology Student Organization)	mmoore19@ufl.edu			
Prestwich	Ken	NATL Super Volunteer	kprestwi@holycross.edu	none		
Putz	Jack	Biology	fep@ufl.edu	PO Box 118526	392-3704	
Reeves	Lary	NATL Graduate Teaching Assistant (NATL vice-chair)	lereeves@ufl.edu	PO Box 110620	514-2794	
Robinson	Scott	Florida Museum of Natural History	srobinson@flmnh.ufl.edu		273-1965	
Sessa	Emily	Department of Biology	emilysessa@ufl.edu	PO Box 118526	392-1098	
Sharp	Sean	Wetlands Club	seanjsharp@ufl.edu			
Sieving	Katie	Wildlife Ecology & Conservation Department	chucacao@ufl.edu	PO Box 110430	846-0569	
Smith	Jason	School of Forest Resources and Conservation	jasons@ufl.edu	PO Box 110410	(352) 846-0843	
Smith	Matthew	Department of Plant Pathology	trufflesmith@ufl.edu	PO Box 110680	273-2837	
Walker	Tom	Friend of NATL	tjw@ufl.edu	PO Box 112015	273-3920	
Weeks	Emma	Entomology & Nematology Department (NATL Chair)	eniweeks@ufl.edu		273-3954	

Appendix 8: NAAC Group Photo

