



A Partial Census of Hiking Trail Use, 2013



Cadillac Cliffs Trail 1920s?

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Executive Summary

While there were a few surprises, the 2013 census showed results very similar to censuses conducted ten years ago. Even on a similar date with similar weather, there can be much variation in a spot count or census such as this. Counts at several new sites (relative to earlier censuses) such as the Ocean Path and new trails such the Schooner Head Path, Orange and Black, and Kebo Brook Trail give park managers a sense of how much these places are used. The new trails may not be used as much as we had hoped, but there were other compelling reasons to open them. Listed below are a few specific results of interest.

- The Homans Path had very low use and it was and mostly hikers coming from Dorr Mountain (n=30 traffic). There was more hiker traffic on the Jesup Path in Great Meadow than on the Hemlock Path (Road), and overall hiker use of these trails is modest.
- The new Kebo Brook Trail at Great Meadow Loop Trail had very low use (n=23 traffic). Similarly, the Kebo Brook Trail had very low use where it ends at the North Ridge Cadillac Trail at the Park Loop Road (n=15 traffic). On the other hand, traffic using the Kebo Brook Trail to and from the Gorge Trail was 51. The discrepancy may be due to some hikers using the Kebo Mountain Trail or Strath Eden Path to get to and from Sieur de Monts Spring.
- Individual hikers ascending the North Ridge Cadillac Trail totaled 243, with 126 of them coming from the Island Explorer bus. This is 60 hikers more than any census count from 1999 – 2003.
- Hiker use of the Spring Trail (190 entries) and Asticou Trail (155 entries) was substantially higher than earlier censuses. Few hikers used the Jordan Stream Trail.
- Forty-five individual hikers took the Schooner Head Path from Compass Harbor south. Traffic had dwindled by the Orange and Black Path, and few hikers used the Orange and Black Path at all (<10 traffic). The far end of the Schooner Head Path at the overlook had little traffic (n=32) as well. What we may be missing are hikers from the Jackson Lab, who may not get as far as our count sites on their lunchtime walks.
- For the Ocean Path at the Sand Beach Upper Lot, 1357 hikers entered (194 per hour) and 1231 exited. The total traffic on that section of trail was 2588.
- For the Ocean Path at Monument Cove, 1186 hikers came or went on the path to the north and 1349 hikers came or went on the path to the south, for a total traffic of 2535. Traffic out to and from the side path along Monument Cove was 243. Approximately 1389 individuals passed this location, or about 198 per hour.
- The Ocean Path near Otter Point had 192 individual hikers headed north and 328 headed south for total traffic of 520.

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INTRODUCTION

On Tuesday August 6, 2013 the National Park Service conducted a census of hikers at 29 locations throughout the hiking trail system of Acadia National Park (Figure 1). The purpose of this census was to obtain counts of hiker *traffic*, which is different from the census counts of *entries* of individual hikers to the trail system that we conducted from 1999 – 2003 (see Jacobi 2003, Jacobi 2002, Jacobi 2001a, Jacobi (2001b), and Chase and Jacobi 2000). In our earlier censuses, we counted at almost all trailheads throughout the park over two busy days in early August. This effort was more focused.

Traffic is a count of hikers coming and going in all directions through a designated point, like an intersection. By counting where hikers came from and where they went to (usually counting each hiker twice), we get a measure of overall hiker traffic on each section of trail radiating from that location. By counting at intersections within the system (as opposed to trailheads only) we also get more detailed information that is of greater value for planning trail maintenance projects.

Due to the number of locations for the 2013 census, we divided the trail system into two halves and planned to conduct a census of each half in consecutive years. In 2013 we counted only on the East side of Mount Desert Island. In 2014, we will count mainly on the West side with a few locations on the East side. In some cases, we did not count at trailheads for which we have an electronic trail counter in place (e.g. Gorham Mountain Trail). For this census we also targeted the Ocean Path because it was not included in the earlier censuses.

METHODS

The diversity of count sites made it a challenge to provide clear generic instructions to all census takers, and a few sites required special instructions. Count sites came in four varieties as shown in Table 1. With a few exceptions, we counted each hiker twice as they passed by us as they arrived from one trail/direction and left on another. Hikers were counted only once at single trail trailheads as they entered, though we might count them again later if they exited at the same location. Similarly, they were also counted only once if they parked (or got off a bus) and entered a trail, or exited a trail and got in their car (or got on a bus) to leave.

Table 1: Types of Count Sites and What We Counted at Them		
Count Site Type	Example	What We Counted
Single trail trailhead	Giant Slide Trail	entries and exits
Trail crosses road, or trails on both sides	Cadillac North Ridge/Kebo Brook Trails	direction hikers were coming from and going to
Multiple trail trailhead	Gilley Field Trails	direction hikers were coming from and going to
Trail intersections, usually not too far from road	Canon Brook Trail/Kane Path	direction hikers were coming from and going to

Park staff and volunteers conducted the counts. We counted in 3.5 or 7 hour shifts from 9:00 a.m. to 4:00 p.m. Only children under their own power were counted. We also counted rangers and volunteers that entered in uniform and made notes of any large groups of 10 or more.

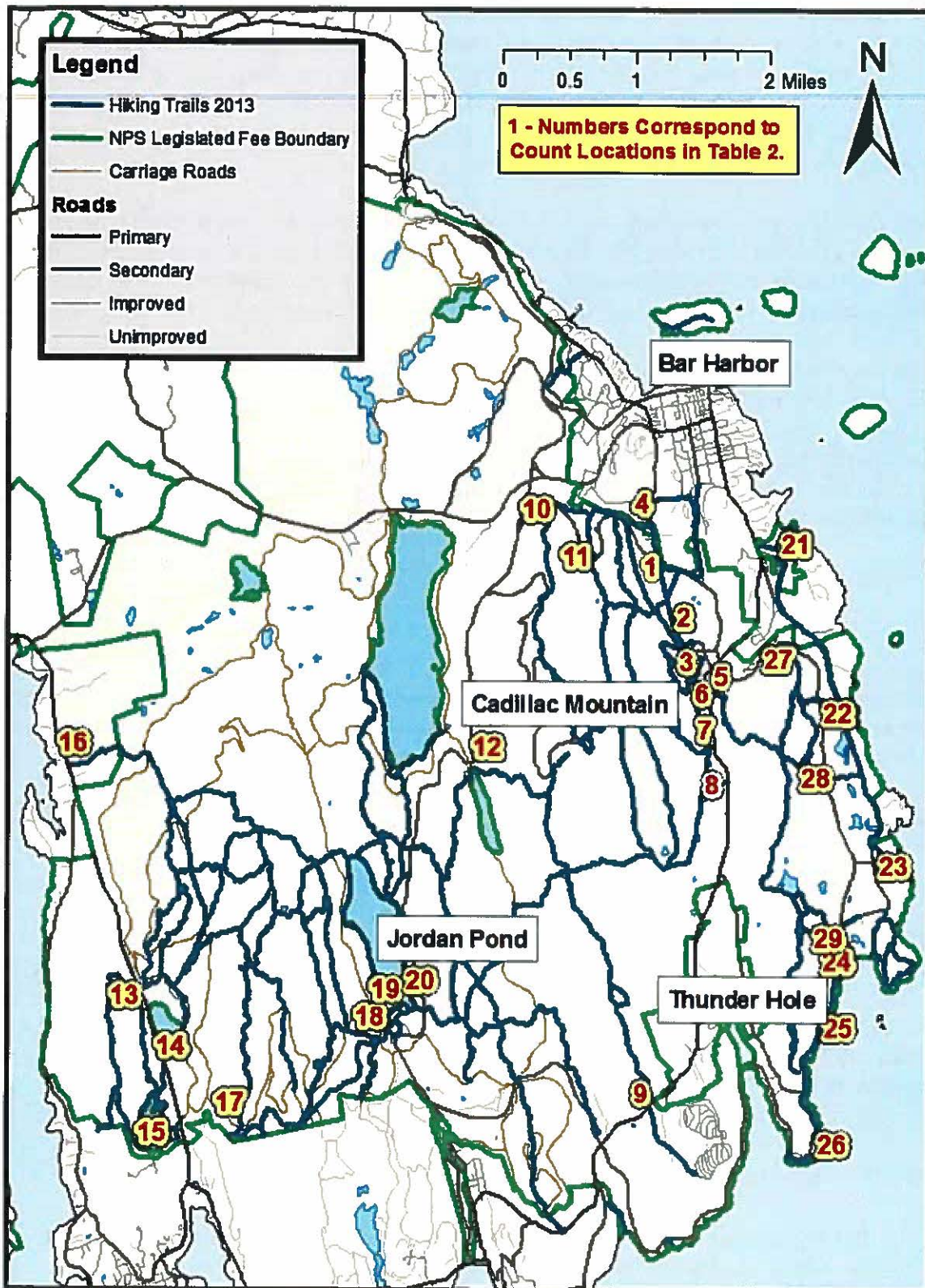


Figure 1: 2013 Hiking Trail Census Count Locations.

Because of the complexity of the counting instructions and the count sites, we drew maps on the back of each site's data sheet for reference and made personal contact with each census taker beforehand, usually on-site, to explain the protocols. On the census day, two coordinators circled the park to make contact with each census taker in the field to further ensure protocols were followed. We were also prepared to postpone the census in the event of bad weather, but the weather was good on August 6, 2013.

One thing this method of counting traffic does *not* allow us to do with the data is come up with a total number of either individual hikers or hiker traffic. At some sites, because of either their geography or the volume of hikers, cars, and buses, census takers cannot track all individuals closely enough as they come and go to trails, buses, and parked cars (e.g. North Ridge Cadillac).

What we do provide is a measure of the number of hikers "coming from" and "going to" (or "entering" and exiting") for each trail or trail segment. For many sites where the counting is easier, we can obtain a count of individual hikers by dividing the total traffic through the intersection (for example - Canon Brook Trail/Kane Path) in half. Depending on the volume of traffic or individuals passing through an intersection we may calculate a simple mean number per hour to describe the data further.

RESULTS

The results of the census are shown in detail in Table 2. We will report on some of the more interesting observations for trails based on their either low or high levels, and/or our level of surprise at those levels based on local knowledge. We will distinguish between hiker traffic and individual hikers/entries/exits. Numbers refer to numbers in Table 2 for easy reference.

2. The Homans Path had very low use and it was and mostly hikers coming from Dorr Mountain (n=30 traffic). There was more hiker traffic on the Jesup Path in Great Meadow than on the Hemlock Path (Road), and overall hiker use of these trails is modest.

4. The new Kebo Brook Trail at Great Meadow Loop Trail had very low use (n=23 traffic). Similarly, the Kebo Brook Trail had very low use where it ends at the North Ridge Cadillac Trail at the Park Loop Road (n=15 traffic). On the other hand, traffic using the Kebo Brook Trail to and from the Gorge Trail was 51. The discrepancy may be due to some hikers using the Kebo Mountain Trail or Strath Eden Path to get to and from Sieur de Monts Spring. See #11 for more information on use of the Kebo Brook Trail.

7. Somewhat surprisingly, 98 individual hikers ascended the Ladder Trail.

9. Somewhat surprisingly, traffic on the Cadillac South Ridge Trail to and from Blackwoods Campground was 68. At least some hikers are foregoing the drive from their campsite out to the road.

10. Individual hikers ascending the North Ridge Cadillac Trail totaled 243, with 126 of them coming from the Island Explorer bus. This is 60 hikers more than any census count from 1999 – 2003.

11. Individual hikers ascending the Gorge Path totaled 61, although confusingly, 101 descended from the parking area to the count site under the bridge. This high number is in line with anecdotal reports of more than 25 cars parked at one time at the Gorge Trailhead during the summer, spilling down the side of the Park Loop Road past the parking area. But where did those other 40 hikers go? You would think that almost all the hikers would head up the Gorge Trail. At this site, we asked hikers headed north on the Gorge Path (down) which way they would go on the Kebo Brook Trail. Thirty-four hikers counted at this location went to and from the Great Meadow Loop Trail via Kebo Brook Trail, and 17 hikers went to and from the Paradise Hill Road via Kebo Brook Trail. It is unclear how many hikers are using the new Kebo Brook Trail to make a hiking loop from the Gorge parking area. See #4 for more information on use of the Kebo Brook Trail.

12. Ninety-four individual hikers went up the West Face Cadillac Trail. Twenty-three came down. This trail is one of the more difficult ones in the park. Past censuses generally showed much fewer entries although one year was comparable with 91.

14. Twenty-seven individual hikers entered the Hadlock Ponds Trail going north at Upper Hadlock Pond and 14 exited. Fifteen individual hikers came there from Lower Hadlock Pond and 8 went from there to Lower Hadlock Pond. From 1999 – 2002 (no 2003 count) we counted 0, 2, 8, and 5 hikers entering the Hadlock Ponds Trail going north, so 2013 shows quite a change. The trail to the south has recently been fully rehabilitated and it is encouraging that some hikers are using it.

17. Hiker traffic at the far southern end of Sargent South Ridge Trail at the carriage road was 47 hikers going to and from Cedar Swamp Mtn, similar to the previous censuses. Hiker traffic going to and from the Asticou Trail was 31. We had not counted hikers here previously and it is encouraging to see the trail being used.

18. Hiker use of the Spring Trail (190 entries) and Asticou Trail (155 entries) was substantially higher than earlier censuses. Few hikers used the Jordan Stream Trail.

19 and 20. Jordan Pond Trail saw entries similar to earlier censuses, around 400 or more entries on each side.

21. Forty-five individual hikers took the Schooner Head Path from Compass Harbor south. Traffic had dwindled by the Orange and Black Path, and few hikers used the Orange and Black Path at all (<10). The far end of the Schooner Head Path at the overlook had little traffic (n=32) as well. What we may be missing are hikers from the Jackson Lab, who may not get as far as our count sites on their lunchtime walks.

24. For the Ocean Path at the Sand Beach Upper Lot, 1357 hikers entered (194 per hour) and 1231 exited. The total traffic on that section of trail was 2588.

25. For the Ocean Path at Monument Cove, 1186 hikers came or went on the path to the north and 1349 hikers came or went on the path to the south, for a total traffic of 2535. Traffic out to and from the side path along Monument Cove was 243. Approximately 1389 individuals passed this location, or about 198 per hour.

26. The Ocean Path near Otter Point had 192 individual hikers headed north and 328 headed south for total traffic of 520.

28. The Precipice Trail had 312 entries and 13 turnarounds (the Eliminator?). This is similar to the earlier censuses.

29. The Beehive Trail had 462 entries and the Bowl Trail 124. Individual hikers passing through through the intersection below the popular climb was about 1243 hikers, or about 178 per hour.

Duck Brook Road. We counted at the closed entrance to the Duck Brook Road by a fortuitous error. 314 bikes entered the Duck Brook Road from West Street Extension and 229 exited to West Street Extension.

Groups. There were 20 groups totaling 265 people for an average of 13 per group. None of these were the same group counted twice. One group at the Homans-Hemlock-Jesup junction was with an interpretive ranger. Six large groups were counted on the Ocean Path.

**Table 2: Hiker Traffic Coming From and Going To Various Trails on August 6, 2013 from 9:00 a.m. to 4:00 p.m.
at Twenty-nine Count Locations in Acadia National Park**

Count Location					
1. Jesup Trailhead @ PLR					
Coming From	Jesup Trail	Grt Mdw Loop - Kebo St	Grt Mdw Loop - LL Ave	Individual Hikers	
Going To	52	23	14	Through Jct	
Total Traffic	27	32	20		
	79	55	34	84	
Julie Grindle/Max Swann					
2. Homans - Hemlock - Jesup jct					
Coming From	Homans Path	Jesup Path - North	Hemlock Path - North		
Going To	25	71	59		
Total Traffic	5	84	26		
	30	155	85		
Kriston Dillon					
3. Emery Path – Jesup Path jct					
Coming From	Springhouse/SDM Pkg	Emery Path	Jesup Path North	Jesup Path South	Individual Hikers
Going To	94	58	19	31	Through Jct
Total Traffic	50	80	30	31	
	144	138	49	62	196.5
June Devisfruto/Liz Weston					
4. Kebo Brk Tr at Grt Mdw Loop jct					
Coming From	Grt Mdw Loop - North	Grt Mdw Loop - South	Kebo Brook Trail	Individual Hikers	
Going To	15	30	12	Through Jct	
Total Traffic	25	19	11		
	40	49	23	56	
Doug Hedin/Betsy Mitchell					
5. Tarn parking/Beachcroft Trailhead					
Coming From	Beachcroft Trail				
Going To	68				
Total Traffic	66				
	134				
Emma Albee/Jim Linnane					
6. Tarn - jct Diedrich, Jesup, Kane					
Coming From	Beachcroft Path -Pkg, Rt 3	Kurt Deldrich Climb	Jesup Path - North	Kane Path - South	Individual Hikers
Going To	61	28	70	49	Through Jct
Total Traffic	57	34	53	64	
	118	62	123	113	208
David ?/Judy Connery					
7. Ladder Tr – Kane Path jct					
Coming From	Ladder Trail - Pkg Rt 3	Ladder Trail - Dorr Smt	Kane Path - North	Kane Path - South	Individual Hikers
Going To	57	18	55	70	Through Jct
Total Traffic	28	98	45	26	
	85	116	100	96	198.5
MC Lenahan/Kate Pontbriand					

**Table 2: Hiker Traffic Coming From and Going To Various Trails on August 6, 2013 from 9:00 a.m. to 4:00 p.m.
at Twenty-nine Count Locations in Acadia National Park**

Count Location					
8. Canon Brk Tr jct Kane Path	Can Brk Tr - Pkg Rt 3	Canon Brk Tr South	Kane Path - North	Individual Hikers	
Coming From	33	51	19	Through Jct	
Going To	23	30	50		
Total Traffic	56	81	69	103	
Bill McArtor					
9. Cadillac Mtn SR Tr - Rt 3	Cad SR to Summit	Cad SR to BWCG			
Coming From	104	27			
Going To	99	41			
Total Traffic	203	68			
Robyn King/ Karen Anderson					
10. Cadillac NR Trailhead (PLR)	Cad NR to Summit	Cad NR to Kebo Brk Tr			
Coming From	175	4			
Going To	243	11			
Total Traffic	418	15			
11. Gorge Path/pkg @ jct under bridge	Gorge Path Pkg	Gorge Path to Gorge	Kebo Brk Tr to GML	Kebo Brk Tr to Para Hill	Individual Hikers
Coming From	101	49	10	7	Through Jct
Going To	61	61	24	10	
Total Traffic	162	110	34	17	161.5
Moirá O'Neill					
12Bubble Pd Pkg - Cad W Face Tr	Cadillac W Face Tr				
Coming From	23				
Going To	94				
Total Traffic	117				
13. Norumbega Mtn Parking	Goat Trail	Had Brook Trail	Lwr Nor Trail		
Coming From	6	52	39		
Going To	43	28	11		
Total Traffic	49	80	50		
Kendall Davis					
14. Hadl Pds Tr pulloff at Upr Hadl Ponc	Hadl Pds Tr - Sgt Mtn	Had Pds Tr to Lwr HP			
Coming From	14	15			
Going To	27	8			
Total Traffic	41	23			
Conor Crandall					

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Count Location					
15. Lwr Hadl Pond - across dam to jct	Hadl Pds Tr to Upper	Norumbega Mtn Tr	Wtr Pipe Tr to Golf	Wtr Pipe Tr to 198	Individual Hikers
Coming From	5	42	4	31	Through Jct
Going To	43	8	9	22	
Total Traffic	48	50	13	53	82
Logan					
16. Giant Slide Trailhead Rts 3/198	Giant Slide Trail				
Coming From	14				
Going To	32				
Total Traffic	46				
Grace Drennan					
17. Carriage road jct with Sargent SR Tr	Sargent SR - up	Sargent SR - Down	Carr Rd West	Carr Rd East	
Coming From	26	15	177	140	
Going To	21	16	150	161	
Total Traffic	47	31	327	301	
Allison Kuzar					
18. Spring Tr at footbridge below JPH	Spring Tr	Ast-JP Path to NEH	Jordan Stream Tr		
Coming From	100	102	6		
Going To	190	155	17		
Total Traffic	290	257	23		
Paul Jackson					
19. Jordan Pd Tr @ carr rd bridge	Jordan Pd Trail				
Coming From	490				
Going To	375				
Total Traffic	865				
Carol Sessions/Jean Bell					
20. Jordan Pd Tr at Bub&Jrdn Pds Tr	JP Trail South	JP Trail North	Bubble-JP Path to PLR	Individual Hikers	
Coming From	506	350	120	Through Jct	
Going To	415	461	44		
Total Traffic	921	811	164	948	
Don Sessions/Don Bell					
21. Compass Hbr Tr - Sch Head Path jct	Compass Hbr Tr - Pkg	Compass Hbr Tr - Shore	Schooner Head Path	Dorr Ruins	Individual Hikers
Coming From	106	44	21	19	Through Jct
Going To	46	81	45	13	
Total Traffic	152	125	66	32	187.5
Jacob Briggs					

**Table 2: Hiker Traffic Coming From and Going To Various Trails on August 6, 2013 from 9:00 a.m. to 4:00 p.m.
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Count Location				
22. Schooner Head Path at O&B Jct	Sch Hd Path South	Sch Hd Path North	Orange and Black	Individual Hikers
Coming From	11	14	7	Through Jct
Going To	17	13	2	
Total Traffic	28	27	9	32
Kyle Brown				
23. Schooner Head Path @ Sch Head Pl	Sch Head Path			
Coming From	20			
Going To	12			
Total Traffic	32			
Ianna Hondras-McCarthy				
24. Ocean Path at Sand Beach Upper Lc	Ocean Path			
Coming From	1231			
Going To	1357			
Total Traffic	2588			
Randy Ewins/Maureen Fournier				
25. Ocean Path@ Mon Cove side tr	Ocean Path North	Ocean Path South	Monument Cove	Individual Hikers
Coming From	678	588	145	Through Jct
Going To	508	761	98	
Total Traffic	1186	1349	243	1389
Mike Kuzar/Jessica Daniel				
26. Ocean Path @ Otr Pt pkg L 200 yds	Ocean Path North	Ocean Path South		
Coming From	328	192		
Going To	192	328		
Total Traffic	520	520		
David Manski/Becky Cole-Will				
27. Champlain NR Trailhead (PLR)	Champlain NR Trail			
Coming From	60			
Going To	84			
Total Traffic	144			
Nathan				
28. Precipice Trailhead (PLR)	Precipice	Eliminated		
Coming From	118	13		
Going To	312			
Total Traffic	430			
Liam/Mary				
29. Beehive Trailhead (PLR)	Beehive Trail	Bowl Trail - to Bowl	Bowl Trail - to Road	Individual Hikers
Coming From	48	659	553	Through Jct
Going To	462	124	640	
Total Traffic	510	783	1193	1243
John				

SUMMARY AND RECOMMENDATIONS

While there were a few surprises, the 2013 census showed results very similar to censuses conducted ten years ago. Even on a similar date with similar weather, there can be much variation in a spot count or census such as this. Counts at several new sites (relative to earlier censuses) such as the Ocean Path and new trails such the Schooner Head Path, Orange and Black, and Kebo Brook Trail give park managers a sense of how much these places are used. The new trails may not be used as much as we had hoped, but there were other compelling reasons to open them.

From a methodological standpoint, counting “traffic” at intersections is much more of a challenge than simply counting hikers entering trail, especially at very busy sites. Though errors are much easier to make, we are confident these data are accurate enough for their purpose. It takes considerably more time to plan, train, and supervise all the people counting. We learned much about how and what to count at several sites, and this will help with the new sites for the 2014 census.

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