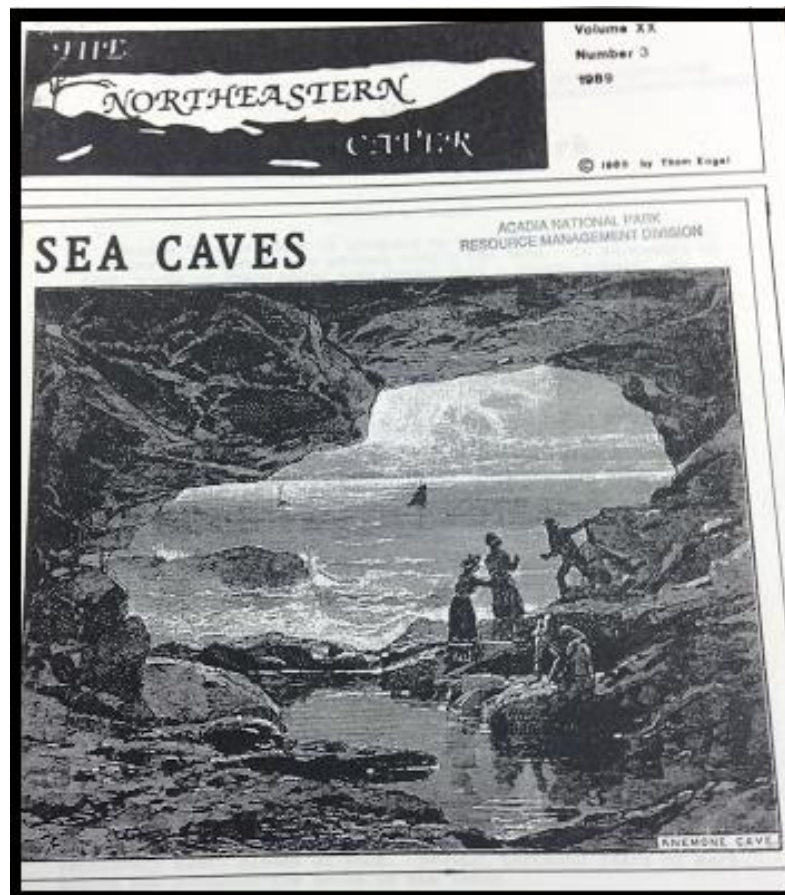


History of Visitor Use and Management of Anemone Cave, Acadia National Park, Maine

Madeline Motley and Ariana Rambach



Northeastern, 1889.

Acknowledgements: We would like to thank Zinta Rutins, Ken Cline, Charlie Jacobi, Robyn King, Rebecca Cole-Will, Emma (IRMA assistant), Raymond Stout, Don Lenahan, and Tyler Freitas.

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Introduction

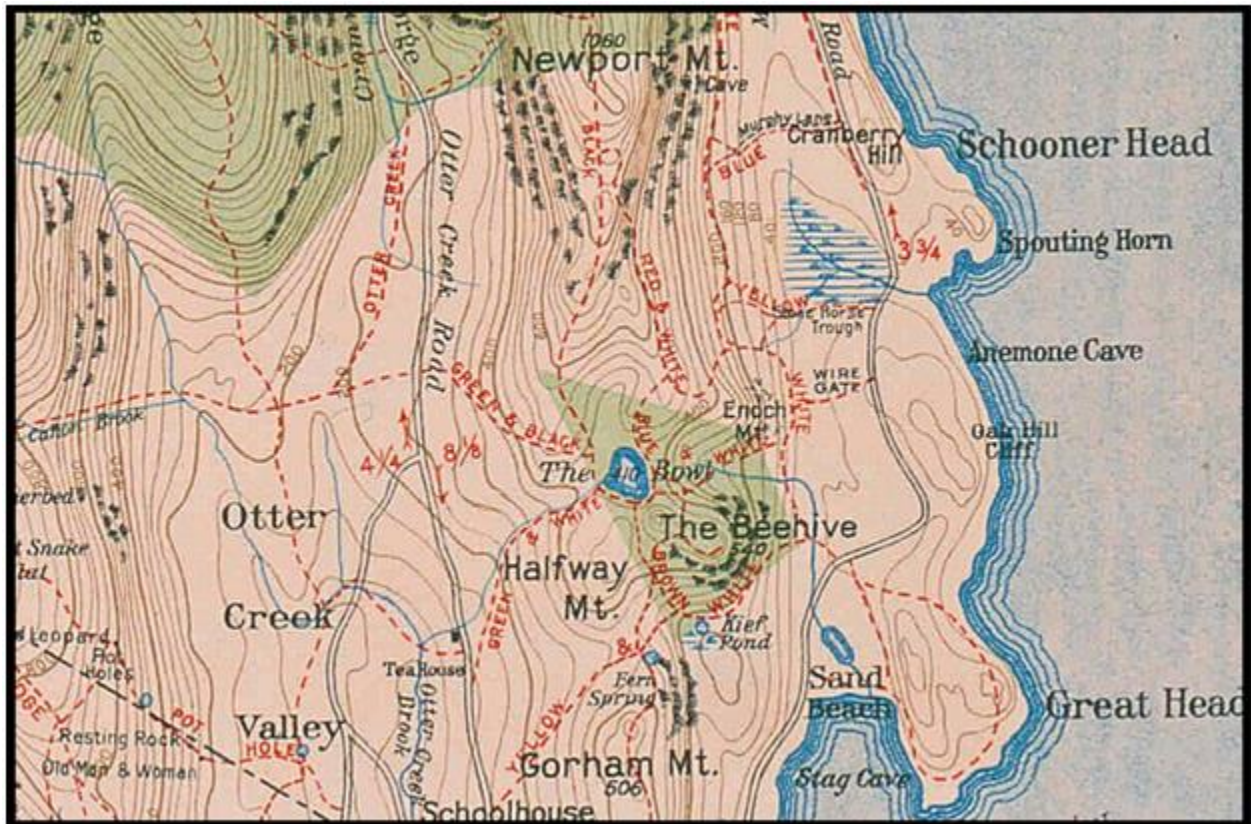
This paper focuses on Acadia National Park's Anemone Cave whose biological diversity has attracted visitors for over a hundred years. Exploration of the cave began in the 1870s and by the 1900s the site had been identified as a point of interest on Mount Desert Island. The establishment of Acadia National Park and growth of park infrastructure further expanded tourist activities within the site. The Park Service promoted visitation to Anemone Cave, but by the late 1960s concerns that frequent visitation was having negative effects on the marine life were raised. Between the summer of 1969 and 1971 the National Park Service remove Anemone Cave from the park issued maps and brochures. Sign and rails were also taken down around the same time to discourage visitation. Beginning in the 1980s, several biological surveys were performed in an effort monitor marine species abundance and distribution. In particular, these studies focused on the three species of anemones present in the cave. Along with biological surveying, visitor use studies were periodically conducted to monitor the use of Anemone Cave and the potential damage from its visitors. Currently, research projects by the Park Service and undergraduate students continue to monitor the biological standing and visitor use.

The primary questions paper will addresses include:

- When did Anemone Cave begin being utilized as a tourist attraction?
- What kind of use did it receive?
- When was the management decision made to take it off the map?
- How it is currently being managed to control visitor impact?

Anemone Cave

Anemone Cave is located on the eastern side of Mount Desert Island near the Schooner Head Outlook in Acadia National Park, Maine [N 44.34564 and W -68.17612]. The largest of the six sea caves located on Mount Desert Island, it is geologically and biologically unique to both Acadia and Gulf of Maine (Rubin, 1991). Like the other sea caves on the island, including Great Head Sea Cave and Cadillac Cliff Sea Cave, Anemone Cave was formed by several thousand years of constant wave action. At mid-tide the cave entrance is about 35 feet wide and 15 feet high, and extends back 60 feet (Jacobi, 1998). Two larger tidal pools and several smaller ones are exposed from about mid-tide to low tide. The tidal pools are high in the intertidal zone. By high tide, the pools and the cave are awash but the water level is well below the ceiling (Jacobi, 1999).



Old park map showing Anemone Cave. [1909]

Biological Inventory

The most recent complete list of species within Anemone Cave.

Species found in Anemone Cave, Dorhety (1991)

Animals

Northern Red Anemone, *Tealia felina*
Silver Spotted Anemone, *Bunodactis* (= *Aulctina**) *stella*
Frieded Anemone, *Metridium senile*
Amphipods, *Gammarus spp.*
Barnacles, *Semibalanus balanoides*
Arctic Rock Borers, *Hiatella arctica*
Tortoiseshell limpets, *Acmaca* (= *Tectura****) *testudinalis*
Blue mussel, *Mytilus edulis*
Nudibranchs, *Aeolidia papillosa*
Periwinkles, *Littorina spp.*
Green, red, and yellow sponge, *Haliogondria panicea*, *Haliclona permollis*
Sea urchins, *Strongylocentrotus drobachiensis*
Whelk, *Thais* (= *Nucella***) *lapillus*

Algae

Edible kelp, *Alaria spp.*
Knotted wrackweed, *Ascophyllum nodosum*
Irish moss, *Chondrus crispus*
Coralline algae, *Corallina spp.*
Rockweed, *Fucus spp.*
Horsetail kelp, *Laminaria digitata*
Dulce, *Rhodymenia* (= *Palmaria***) *palmata*
Sea lettuce, *Ulva lactuca*
Hildenbrandia rosea

* Indicates both genus names were given in original literature.

** Indicates new genus name that has changed since '91.

Additional species noted in Anemone Cave, undated

Hildenbrandia rosea- described as bright pink, encrusting algae.



Tealia felina (middle) and *Bunodactis stella* (left and right) at Anemone Cave, Fall 2013, Madeline Motley



Bunodactis stella, Southwest Harbor, 2012, Madeline Motley (above).

Metridium senile, National Geographic by Peter Verhoog (below).



History of Visitor Use of Anemone Cave

Settlement of Mount Desert Island (1760-1869)

Settlement of Mount Desert Island began in the 1760s when fishermen and their families settled on the rocky shore. Due to the close proximity to sailing routes, early settlement gravitated to the west side of the island, but slowly moved toward the east half when soil there proved better for farming. The town of Eden (renamed Bar Harbor in 1918) was established in 1796, and by the 1820s had established a solid economy of fishing, lumber harvesting, and shipbuilding. While economically fruitful, Mount Desert received little attention from outsiders. In 1844, Hudson River School painter Thomas Cole arrived on Mount Desert to produce scenic landscapes of the island's deep forests and rocky shores. Paintings by Cole and other Romantic artists quickly attracted the interest of wealthy New England patrons further south. Enticed by the images of a stunning and rustic landscape these city dwellers hoped to come and experience a simpler life. There rusticators came for the warm summer months in search of beauty and solitude, and found crude accommodations with local fishermen and farmers who put them up for a modest fee.



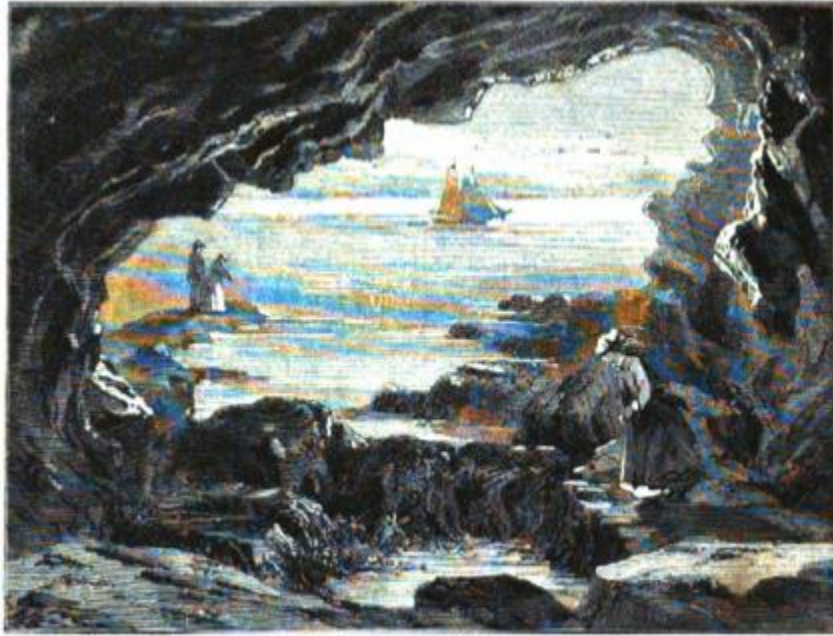
Frenchman's Bay, Mt. Desert Island, Thomas Cole (1844), provided by Raymond Strout.

Early Visitation of Anemone Cave (1870-1915)

Once an infrastructure for tourism had been built, newspaper publications and other private agents began to promote Mount Desert Island as an exciting destination. Articles, brochures, and guidebooks identified sites of interest on the island and helped to direct tourists once they arrived. The earliest reference to visitation of Anemone Cave appears in an 1872 publication of Harper's magazine, in which a picture of the cave is featured on the cover. The article provides a poetic description of the cave as an "extraordinary cavern" beaten by waves that leap up "as if in anger of the bold intruder who seeks to learn the secrets of the rocky hiding place." This imagery was further mystified by the cave's early names "Cave of the Sea" and "Devils Den" before the title "Anemone Cave" became popularized. Despite these harrowing descriptions, drawings included with the article provide indication of what groups commonly frequented the cave. In these sketches woman in long dresses stand around the edges of the pools implying that the cave was fairly accessible at the time. In the first drawing the bay is rendered as calm and placid, but the second shows the power of the surf. This dichotomous presentation of Anemone Cave hoped to invoke within potential visitors both the thrill of adventure and the wonder of quiet discovery.

Among many points of interest there is a celebrated cave called the "Devil's Den" the "Cave of the Sea." and other strange names. It can only be entered at low tide, and it requires a good degree of muscular effort and a sure foot to descend from the cliff to the entrance of this extraordinary cavern, where, at your very feet, the waves are tearing and roaring over jagged rocks, now and then leaping up as if in anger of the bold intruder who seeks to learn the secrets of the rocky hiding place; and it is well for you not to be found there an hour later, for then the waters have their wild way in the big cave. Now, however, it is as still and quiet as a dungeon; but unlike such melancholy location, here, in the darkest shadow, we find is a pool of water, reposing in complete peace and security, the most exquisite of sea anemones, orchids of rich colors, zoophytes, star-fish, and the most delicate of weeds and mosses-all of them presenting the prettiest picture imaginable. - Harper's Monthly, 1872

MOUNT DESERT.



CAVE OF THE SEA, SCHOONER HEAD.

“Cave of the Sea, Schooner’s Head” Harper’s Monthly, 1872 (above).

“Devil’s Den and Schooner Head” Harper’s Monthly, 1872 (below).

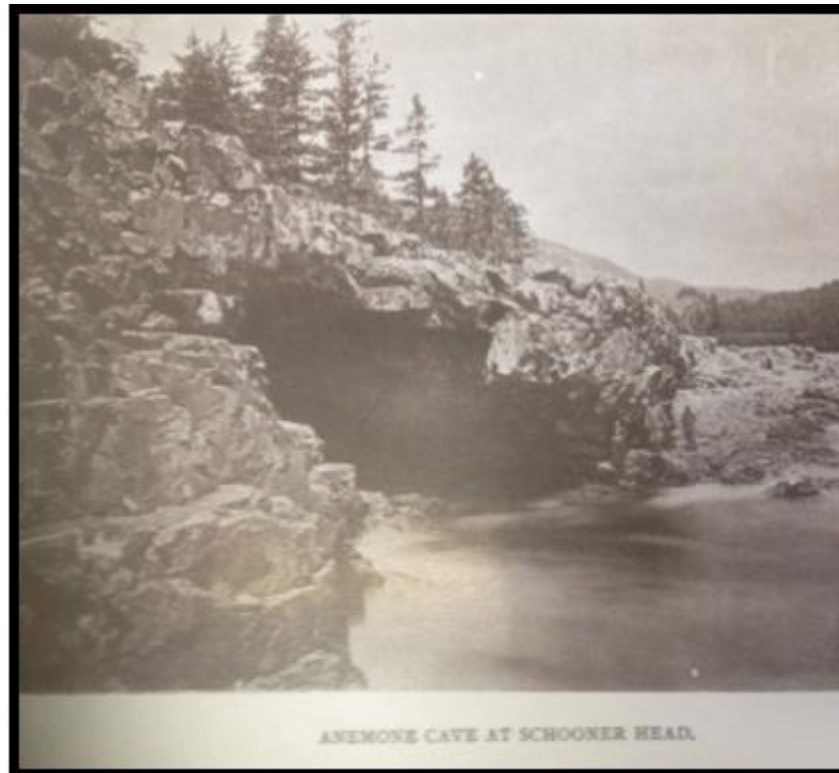


DEVIL'S DEN AND SCHOONER HEAD.

By the mid-1800s fisherman huts and village cottages were overflowing with summer visitors, and by 1880 thirty hotels had been built on the island to accommodate the expanding tourist industry. While many hotels were being erected, wealthy families also went about building large estates or “cottages” in several of the island communities including Bar Harbor, Seal Harbor, and Northeast Harbor. For their leisure, a series of driving roads were laid out along the seashore and up to the summit of Green Mountain (later renamed Cadillac in 1918). From newspaper accounts, it is clear that Anemone Cave was frequently visited and incorporated into tours of the island’s eastern coast. An account by a Portland visitor states, “Leaving Southwest Harbor we cross the entrance to Somes Sound pass the little village of Northeast Harbor, sight the Otter Cliff, gaze at the stupendous wall of Great Head, peer into Anemone Cave, recognize the white sails of Schooner Head, and catch sight at last of the protecting Porcupines [islands] which guard Bar Harbor” (Mount Desert Herald, 1881). In 1887 two photo books of MDI were published, both included Anemone Cave, further suggesting the cave was visited regularly. The 1888 Bar Harbor town record documents the plan to build the Sand Beach Road. It details the route that would serve the increasing number of summer visitors as forging a passage from Bar Harbor to Schooner Head. The road allowed stops at Spouting Horn, Anemone Cave, the Sand Beach, Thunder Cave and Otter Cliffs, and visitors returned by way of Otter Creek (Bar Harbor Record, 1888).



“Anemone Cave” The Coast of Maine: Campobello to the Isles of Shoals Guide Book, 1889.



"Anemone Cave at Schooner Head" Mount Desert Illustrated Book Postcards of Anemone Cave, 1889.

Postcards provided by Raymond Strout



Throughout the 1900s use and enjoyment of Anemone Cave expanded. The Bar Harbor Times reports frequent trips by high school students during the early 1900s (Bar Harbor Mount Desert Herald, 1905). Anemone Cave also inspired other creative works. In 1904, Arthur Lockhart published a poem written for the record entitled Mount Desert, “Thou tarn of the eagle mid mountain replying/ Thou organ of Neptune--Anemone cave--/ Thou mount of the winds, where the torn cloud is flying/ For me your delights and austerities save.” Cite?

Establishment of the National Park (1916- 1929)

Sieur de Monts National Monument was established July 8, 1916. On February 26, 1919, it became Lafayette National Park (later renamed Acadia in 1929) named in honor of Marquis de Lafayette, a French supporter of the American Revolution (National Geographic, 2013). The park was created by parceling together private landholdings and so the acquisition of the of park lands was a slow and arduous process. Schoodic Point did not become part of the National Park until 1922 when it was bought from the two daughters of John G. Moore, who were planning to build a summer hotel on top of Schoodic Mountain. They handed the land over to the park provided the name would be changed to Acadia. Anemone Cave and Schooner point were included in park boundaries during the initial establishment and fell under management by the National Park Service (NPS, 2014).

With the establishment of the new National Park, tourism expanded and flourished further (NPS, 2014). Guided auto tours through Acadia became popular in the 1920s. A September 13, 1922 article in the Bar Harbor Times describes the guided tours in detail, “This is an automobile trip of approximately 40 miles covering the principal points of interest on the island.” This included Kebo Golf Course, Lafayette National Park, Mount Desert Nurseries, and Anemone Cave. The interest in Anemone Cave expanded beyond aesthetic appeal. A clipping from 1922 mentions a “delightfully interesting talk” by Prof Dahlgren, director of the Marine Biological Laboratory, in the cave (Bar Harbor Times, 1922). Interest in the cave’s biological communities would only increase over the next 40 years.

Increased Visitation (1930- 1969)

Few sources detail tourism in Anemone Cave during the 1930's and 40s. However we know that by the 1930s Acadia National Park begun promoting Anemone Cave through tours and brochures. A popular park activity included naturalist cruises around the island during which Anemone Cave was identified as a sight of interest. While these tours did not land at the cave they increased and perpetuated visitation of the cave (Sullivan, 1938).

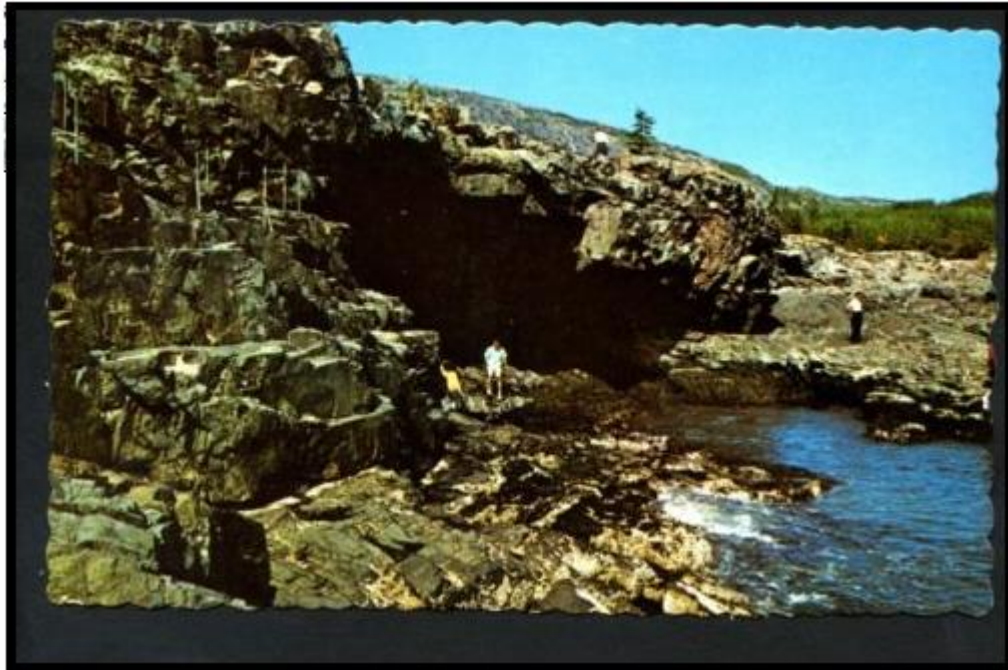


“Naturalist Cruises of Acadia” Sullivan, 1938.

The 1950s were marked by an expansion of park infrastructure as new roads and paths were built in response to the Mission 66 effort. This federally funded program was created to improve deteriorated, dangerous conditions in the national parks and to support the massive visitor boom that followed World War II. Over the course of the 10 years, \$1 billion of federal funds were spent on improvements to parks. Acadia National Park benefited from the federal funding and in 1958 both the Anemone Cave parking lot overlook and footpath leading to the cave were redone (Bar Harbor Times, 1959). In 1959 a new sign was placed at the path leading down from the parking lot. The interpretive sign posted read:

When the 10-foot tides recede from the cave's -darkened interior, pools of sea water remain to form the home of myriad and colorful plants and animals. Most conspicuous of these is the bright pink enamel-like crust lining these tide-pools. It is a living plant. a coralline alga. And looking like little reddish - brown

rosettes are the many sea-anemones. These flower-like animals resembling miniature dahlias give Anemone Cave its name. Bar Harbor Times, 1959



Anemone Cave Postcard, Pre-1964, provided by Raymond Strout.



Anemone Cave Postcard, 1948, provided by Raymond Strout.

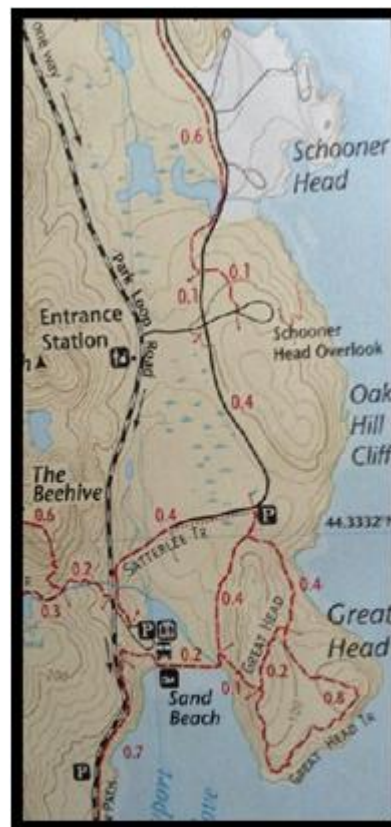
Management of Anemone Cave

Management Decisions

Anemone Cave was once utilized as a tourist attraction, labeled and advertised. Not only were there signs pointing towards the entrance, but the cave was equipped with handrails and steps to assist the less able (Jacobi, 1998). Eventually the Park Service noticed a decline of anemones in the sea cave, and concern arose that the increasing visitor use would lead to the continued destruction and eventual disappearance of anemones. Though there is no official documentation of this damage, the concern was raised through general observation. The concern for the anemones' well-being, threatened by the ignorant and damaging behavior of summer visitors, roused the Park Service into action.

To protect the unique sea life in the cave, yet still leave accessible, the park service decided to essentially hide the cave from the eyes of the general public. The area around the cave was renamed Schooner Head Overlook, and "Anemone Cave" was taken off the official park map. All signs related to the cave were taken down at the same time, along with the handrails and steps. We were unable to determine the exact year of these changes, but written documents consistently confirm that these changes were made sometime between the late 1960s and early 1970s.

Through a family picture taken by Charles Jacobi, Resource Specialist and Visitor Use manager at Acadia, we determined that the rails and steps were definitely there in the summer of 1969. "Anemone Cave" appears on the 1969 official park map, but *not* on the 1971 map. These changes therefore most likely occurred between the summer of 1969 and 1971.



Current park map of Acadia, which does not show Anemone Cave. "Map Adventures," 2012

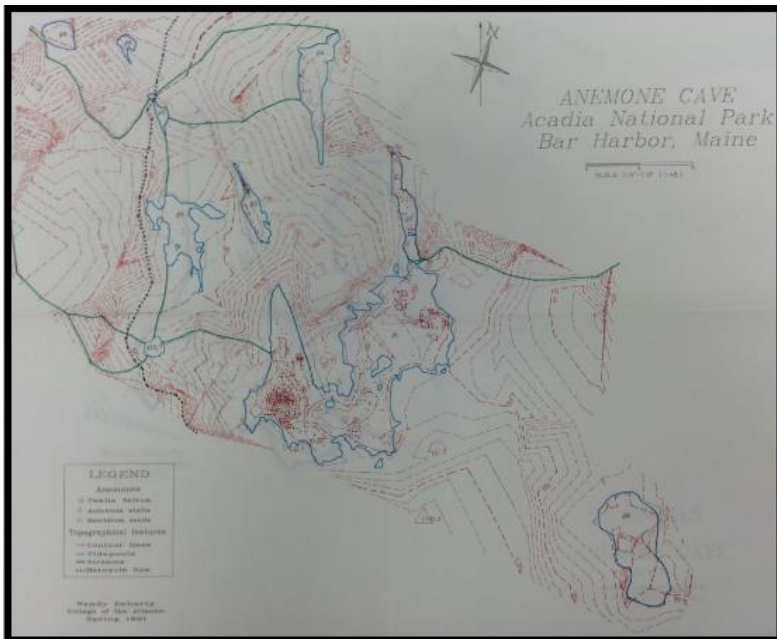
Currently, park staff will not direct visitors to the cave unless they specifically ask about it.

Although Anemone Cave still exists and is accessible, the park service is managing visitor use by eliminating advertisement. The changes appear successful in deflecting visitors, as anemones are now common within the large tide pools (Jacobi, 1999).

Despite the decision to terminate advertisement of Anemone Cave, Park Service officials became concerned about the long term health of the unique composition of sea life in the cave as overall park visitation continued to increase in the 1990's. In 1991, Wendy Dorhety, a College of the Atlantic student, conducted the first census of anemones in Anemone Cave, and mapped each individual anemone on a topographical map. This study intended to provide Acadia National Park officials with a structural base of information on the cave, to be used to guide and inform the park in developing a natural resource management plan. Dorhety described anemones found in the cave during that time, and identified all other species present. Further, Dorhety experimented on the effects of temperature, salinity, and oxygen concentration on the frilled anemone, *Metridium senile*.

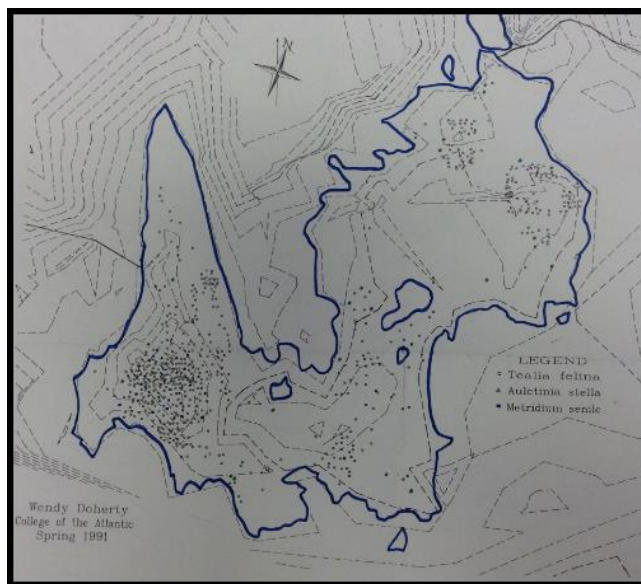
Dorhety's initial study of Anemone Cave provided a great foundation for further study. The topographical map constructed by Dorhety is still being used for tide pool identification in later studies, and to compare populations of anemones. In 1998, university researchers and Acadia National Park began a study of the ecology of Anemone Cave. This study included an assessment of visitation effects, inventory of the cave community, establishment of a monitoring program, and an assessment of what makes the cave unique and whether the life is at risk from visitor use or other environmental factors.

Topographical Maps of Anemone Cave



Anemone Cave

GPS outline of each tide pool in Anemone Cave and GPS location of each individual anemone. Dorhety, 1991.

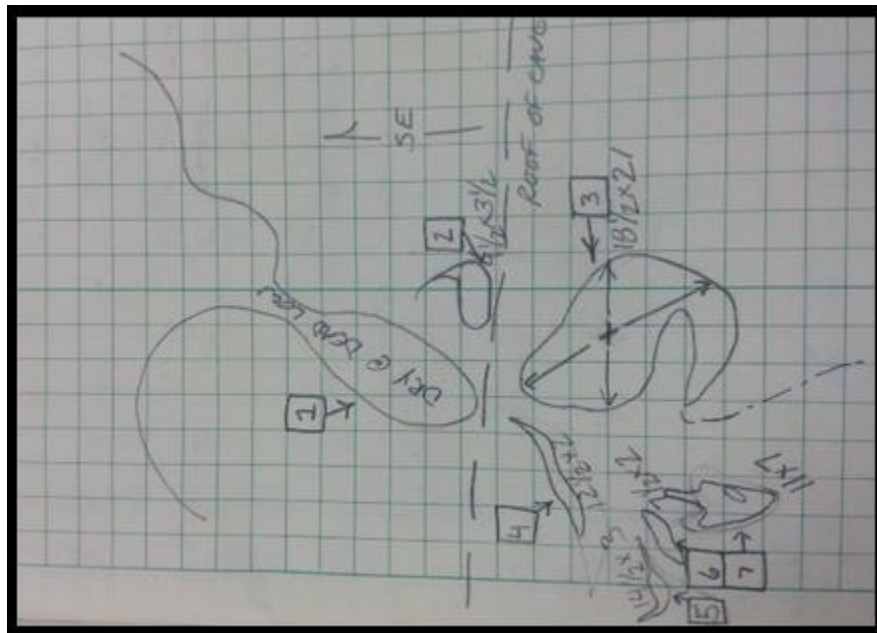


Tide Pool 1

GPS outline and anemones within the largest tide pool in Anemone Cave. Dorhety, 1991.

Biological Surveys and Studies

Park visitor interest encouraged the first biological survey of Anemone Cave (Jones 1988). As one of the few sea caves on Mount Desert Island, Jones (1988) wanted to address the current status of the cave. The study took place over two days- February 25, 1988 and March 16, 1988. Data from 6 major tide pools was recorded, including species and abundance. Jones recorded 'subjective comments' on the impacts of visitors to the barnacle zone and references to the apparent condition of cliff swallow nests located on the cliff ceiling. He concluded that barnacles were absent on the exposed horizontal surfaces, yet abundant and well developed on protected surfaces and vertical crevices. The absence of barnacles on the exposed intertidal rocks is a possible indicator of frequent human trampling.



Drawing of Anemone Cave tide pools, Jones (1988) unpublished field journal.

Dorhety (1991) created the first topographical map of anemone cave, which included a point for every individual anemone in the tide pools. The maps include GPS outlines of each tide pool, labeled 1 through 7. Dorhety concluded that although oxygen concentration would likely not have been a problem for anemones in the cave, temperature and salinity were concerns. Reproduction was affected by temperature; at higher temperatures, anemones had a higher rate of reproduction. Anemone populations would therefore be higher in the summer, which happens to be the time of maximum visitation to the cave. Further, the pools are at their warmest during low tide, as the sun is able to warm the small bodies of water, which is the only time the cave is accessible by humans. This raises a concern that reproductive success may decline due to human disturbance.

Dorhety (1991) listed three main recommendations to Acadia National Park for the continued management of Anemone Cave-

- Acadia National Park should continue the policy of not encouraging visitation to Anemone Cave.
- Acadia National Park should develop program for long-term research to verify and identify how much human disturbance influences populations and to determine other factors that affects population abundances and disturbance.
- Acadia National Park should organize a system for monitoring population growth and decline of the three anemone species found in the cave.

Piesieski of the Department of Environmental Sciences at the University of Pennsylvania continued anemone counts as an undergraduate honors thesis in March of 1999. Two additional censuses that year took place through a contract with Acadia by Petraitis, Beal, and Feghey in May and August. Piesieski noted that there were about 3 million visitors to Acadia National Park in 1999, and that there was an increase rate of about 7% per year. The three censuses from 1999 were combined and concluded that the anemone population had *increased* since 1991.

In 2007, after concerns about the anemone populations first presented in 2001, another census of anemones was taken by Petraitis, using the same Doherty foundation. Populations were compared to those in 1999, and changes were estimated using per pool average of the three censuses from 1999 for each species. Overall, all three species of anemones declined since 1999.

The majority of the decline was seen in pools labeled 1, 2, 3, and 4 by Dorhety. Pools 5 and 7 were noted to have always contained very few anemones, and pool 6 has never contained anemones. The exact cause of this decline is unknown. The overall decline of all three species was 56%. The decline species to species was as follows-

T. felina 71%

B. stella 63%

M. senile 33%

- Petratis (2007)

Low salinity levels have a negative impact on anemones, yet another concern within the cave. Freshwater seepage from the back of the cave may be lowering the salinity levels in the cave. The contamination is obvious to observers, as it forms a freshwater lens on the pools during low tides. This may be a factor in the disturbance of anemones, which are absent from the back of the cave. Freshwater seepage in to the back of the cave could be linked to run-off from the parking lot above Anemone Cave at Schooner Head. Further, tourists consistently mix freshwater into the saltwater tide pools by dipping their hands into the pools. By dipping their hands in the tide pools near the back of the cave, where salinity is the lowest, and then in the tide pools containing anemones, tourists also spread freshwater throughout the cave. By 2001, concern was raised that tourism, along with damage from trampling, may also decrease salinity levels. As of 2014, a group of students at College of the Atlantic began measuring the salinity in the tide pools of Anemone Cave to see whether salinity should be a major concern, and whether it should be factored into management of the cave.

Visitor Use Surveys

Charles Jacobi conducted the first study that measured the amount of visitors to anemone cave in 1998. Electronic counts totaled just over 46,000 visitors between May 19 and September 30. However, this number is believed to be an underestimate due to the inability of the counter to record short visitors (such as children), those traveling too fast, or those who pass by it off-trail. Jacobi (1998) discussed that the numbers seemed very high for the cave not being advertised, but because previous surveys do not exist, there is no way to determine whether visitor numbers have decreased or changed. In addition to Piesieski's (1999) biological survey, some visitation data was also taken (see table 1). Due to declining anemone numbers in all three species in the cave, visitation was again assessed by Jacobi in both 2008 and 2013, but there seemed to be no increase in visitation.

In direct cave observations, there were up to 20 people in the cave at a time (Piesieski 1999). Dogs were also seen to enter the cave with visitors. Similar results were found in 1999, when the study was repeated. On some occasions, entire camp groups would visit the cave with 20 or more people at a time. Classes at College of the Atlantic, such as Marine Biology, still (as of 2014) visit the cave in large numbers. Although the park service does not advertise the cave, other organizations may. Between the two studies, there was no strong predictive relationship. However, factors that influenced cave entry seemed to be weather and the presence of other visitors.

Table 1: Results from Piesieski (1999) Visitor Use Survey

“Observations of human visitors near and in Anemone Cave. The upper half of the table indicates general activities around Anemone Cave. In the parentheses following the counts of individuals are the following percentages: third column- the percentage of people who are near the cave that notice the cave, fourth column- the percentage of those who notice the cave that enter it, and fifth column- the percentage of those who enter the cave that disturb a pool. The lower half of the table indicates specific activities observed on one particular date when disturbance of the pools was much higher than observed on other dates.”

General Activities

Observation Date	# people w/in sight of cave	# people who notice cave	# people who enter cave	# people who disturb pools
29 May	238	161 (67.6)	84 (52.2)	5 (6)
4 July	226	190 (84.1)	79 (41.6)	0 (0)
5 July	320	265 (82.8)	154 (58.1)	1 (0.6)
19 August	138	not recorded	117 (84.8)	36 (30.8)

Specific Activities (on 19 August)
Numbers of individuals observing or disturbing each pool

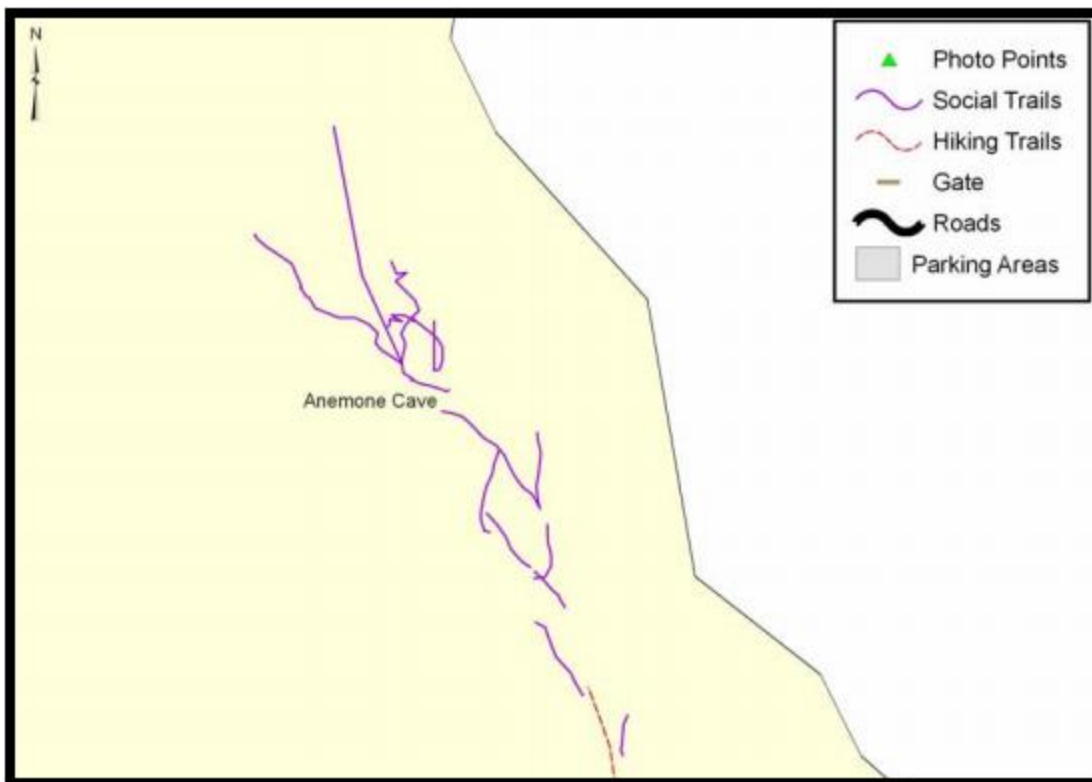
<u>Pool #1</u>	<u>Pool #2</u>	<u>Pool #3</u>	<u>Pool #4</u>	<u>Pool #5</u>	<u>Pool #6</u>	<u>Pool #7</u>
71	10	1	14	5	6	5

Disturbance activities (out of 36 instances)

Just poking hands into a pool	11
Handling or removing organisms	14
Slipping into pools	8
Walking into pool	3

According to Piesieski, visitor behavior was much more alarming and concerning than the actual visitor numbers. Flash photography and hands in the tide pools was common disturbance. Visitors were observed to pick up sea urchins and sea stars, and even moved organisms from one tide pool to another. Several fell into the tide pools, some obtaining minor injuries. Especially in crowded situations, visitors would step on the barnacles in the tide pools, apparently in an effort to navigate around the cave or get a better view. Since there seemed to be no increase in visitors throughout the four surveys (1998, 1999, 2008, 2013), many believe that behavior is the reason behind anemone decline.

Vegetation above the cave, like all well visited areas within the park, is also impacted by tourists. Visitors often don't realize the impact they have by wandering off trail. Visitor-created trails are very common in Acadia, and in 2002 these trails were mapped by Jacobi and Karen Anderson along the Ocean Drive trail and Anemone Cave. These two areas combined had a total of 1.51 miles of visitor-created trails (Jacobi and Anderson 2002).



Map of visitor-created trails around Anemone Cave, Jacobi and Anderson (2002).

Future Management

There is not currently an active management plan for Anemone Cave. Students at College of the Atlantic began research on anemone cave in the spring of 2014, including censuses, salinity measurements, and genetics. Charlie Jacobi mentioned that he will have staff out at the cave, during low tide, to educate visitors and prevent damage. Jacobi (2013) reported that Acadia is beginning to develop a management strategy. The current questions they are assessing are-

- Is another census of anemones needed in 2014?
- How much effect does the number of visitors and their behaviors really have on anemones and other organisms in the highly dynamic marine environment?
- Is the trampling damage around the pool edges acceptable?
- Given the unique nature of Anemone Cave, should hands in pools and handling of organisms be prohibited through regulation or discouraged through education?
- How should an education program be implemented?
- Is it possible to effectively close the cave to general visitor use, and limit visitation to guided programs?
- Is no action (the status quo) a good strategy?

1-Jacobi (2013)

On developing a guided program for Anemone Cave, and prohibition of general visitor use, the park service is hesitant because of past experience. A similar program, the Beaver Watch- a ranger-led daily trip to observe beaver activity- wasn't well received by the public after it proved to be too problematic. In fact, it was frustrating to the public because it was *too* popular. There were too many people who wanted to go on the tour, and many were unable to reserve a spot. Furthermore, rangers would simply be unable to enforce the prohibition 24/7. Signs closing off the cave would also be visually obtrusive, and difficult to maintain the harsh environment.

Education appears to be the most favored approach. Jacobi (2013) proposed a generic sign on the intertidal zone, to be placed at Schooner Head Overlook or on the trail just before reaching the shoreline above the cave. It will be very generic, to avoid an invitation to Anemone Cave and keep it off the radar of most visitors. Jacobi (2013) proposes a sign that follows along the lines of-

*The intertidal zone in this area is unique,
especially sensitive to human disturbance, and extremely slippery.*

Please

- *Know the tides. Avoid high surf conditions*
 - *Tread lightly and carefully*
 - *Do not wade in tide pools*
- *Do not put hands or other objects in tide pools*
 - *Do not touch or remove marine life*
 - *Enjoy the fragile beauty*

And just at the cave entrance-

Anemones have declined here due to trampling.

Please

- *Do not wade in pools.*
- *Do not touch or remove marine life.*

Conclusions

Anemone Cave is a unique environment that provides visitors with the chance to see beautiful organisms that would normally be obscured. Since the 1870's visitors have been delighted to explore this exciting sea cave, an uncommon feature along Maine's coastline. While visitor exploration of the cave was originally encouraged by the National Park Service, the true biological impact of such frequent use was not fully understood until the 1970s. Unfortunately, its beauty is also its downfall. By attracting too many people, the life within the cave has started to dwindle. Once this threat to Anemone Cave was recognized, the Park Service promptly changed its management strategy, deciding to hide one of its wonders to protect it for future generations. While these efforts appeared to be successful at first, another decline in anemones prompted biological and visitor use studies. An official management strategy for the cave isn't yet in full effect, but more and more interest by both college students and the park service is prompting additional surveys and pushing for a management plan. Anemone Cave is truly a spectacular site; it is no wonder that it has attracted so many visitors over the years, prompting collaborative management to protect its fragile inhabitants.



Inside Anemone Cave, March 2013.

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