‘Hey Siri, I need help!’

PHOTO BY MIKE LYNCH

■ *How cellphones are changing search-and-rescue in the park.*

By Janet Reynolds

On Columbus Day weekend a couple decided to climb Whiteface Mountain. They started the hike on the Connery Pond side, sometime between 1 and 2 in the afternoon. By the time they reached the top, it was raining, and, wearing only cotton clothing, they were cold. They also mistakenly thought they could get a ride down the mountain’s road.

“The only useful item they really had was a cellphone,” says forest ranger Scott van Laer, who has participated in some 600 search-and-rescue missions in his 24-year career. “No headlamps, no map or even proper clothing.”

Stories like these show up almost weekly in the Department of Environmental Conservation’s ranger report roundups. People regularly head into the High Peaks wearing only sneakers and T-shirts, the only map the one they’ve got on their phone, their only light source their cellphone flashlight.

Welcome to hiking in the age of cellphones. We may be living in the age of instant information, but also in a world where rangers increasingly have to deal with people who apparently think the only preparation they need is to make sure their cellphone is in their pocket or backpack.

For many people, cellphones are “their security blanket,” says Capt. John Streiff, who runs the Region 5 dispatch center in Ray Brook. “They don’t have the basics of hiking. In the past you had to rely only on yourself,” Streiff says. “They hike up Cascade and they’re not experienced. Off they go with their phone and some minimal gear for the day.”

This change is happening at a time when more people are hiking in the Adirondacks than ever before, while the number of rangers has remained stagnant. In 2007, according to the DEC, 14,737 people registered at the Cascade Mountain trailhead. In 2017, that number was 34,847, a 136% increase. Adirondak Loj saw a 43% increase in that same time period, from 39,825 registered hikers to 56,961. And this is just those who registered. During the same 10-year period the number of rangers increased by one, from 134 to 135. (In 2019 the state announced it was moving two rangers into the Adirondacks. Read more on ranger numbers, page 8.)

The increased number of hikers means rangers are handling more search and rescues than ever before. In 2007, rangers oversaw 223 search-and-rescue missions statewide. In 2018 they handled 346 search-and-rescue incidents throughout the state, according to Streiff. Eighty percent of those involved cellphones calling for help.

While some of these incidents might have been avoided if the hikers had been better prepared, the story of cellphones has an upside as well. The technology improves almost daily. GPS-enabled phones, for instance, mean that dispatch centers can—usually—get coordinates of where the caller is located.

“Technology has improved. Carriers have gotten better with more towers,” Streiff says.

SEARCH AND RESCUE AT A GLANCE

From a 2019 study in the Adirondack Journal of Environmental Studies

Of the **528** incidents that were examined involving **638** victims:

- **55%** were searches
- **42%** were rescues
- **3%** were recoveries
- **58%** of those requiring search and rescue were male
- **31%** were 45-65 years old
- **78%** of search-and-rescues were for hikers
- **42%** of search-and-rescues were for people who were lost
- **24%** were for injuries
- **43%** of injuries were for falls, with **34%** of these for 45-65 year olds, followed by 26-44 year olds at **37%**.
- Most common method of rescue was walking an individual or party out (**56%**), followed by vehicle evacuation (**21%**).

Study authors: Ethan Collins (University of New England College of Osteopathic Medicine) and Peter Pettengil (Environmental Studies, St. Lawrence University).

Forest Ranger search and rescue missions across the state by year:

2007: **223**	2011: **283**	2015: **341**
2008: **245**	2012: **274**	2016: **356**
2009: **234**	2013: **287**	2017: **346**
2010: **210**	2014: **273**	2018: **346**

Sign in stats

The chart below compares the numbers of people that signed in at trailhead registers at four different trailheads in 2007 and 2017, the last year the DEC has completed data. Anecdotal information indicates the number of hikers is rising at other Adirondack High Peaks trailheads, according to the DEC.

TRAILHEAD	2007	2017	%Change
Adirondack Loj	39,825	56,961	43%
Cascade Mountain	14,737	34,847	136%
Adirondack Mt. Reserve	11,556	25,237	118%
Mt. Van Hoevenberg	2,384	4,174	75%
TOTAL	**68,502**	**121,219**	**77%**

"We're getting better locations on where lost or injured callers are."

That improved technology can help rangers learn of problems earlier and potentially solve them more quickly—sometimes without even going into the woods. "I've avoided going into the woods because I've been able to talk to people from their phone on how to get back on the trail. I've had people with a compass and taught them how to use it over the phone," says van Laer, director of the forest ranger division of the Police Benevolent Association of New York.

Bruce Lomnitzer, a full-time ranger since 1999, echoes van Laer's observations. "I've done faster searches because of the phone," he says, recalling a distress call from a couple hiking on Castle Rock. He asked them if they got lost on the way up or the way down. Once they responded, he asked them to look up their GPS coordinates. "His phone didn't have that ability but he had enough cell service to download an app while I was hiking up," Lomnitzer says. "He texted me the location."

Still, rangers and park groups agree that the ease with which people call for help should not eliminate the need to be prepared. "The first principal of Leave No Trace is plan and prepare, and for too many that means just carrying their cellphone," says Neil Woodworth, retired executive director of the Adirondack

Rescues continued on **Page 16**

Rescues continued from **Page 15**

Mountain Club. "They forget that using the GPS feature on a phone, assuming you have cell service, sucks up a lot of power," especially in the cold. People drop phones, and they break.

"I would never go anywhere in the Adirondacks without a map or compass," Woodworth says.

Many people hike without adequate foot gear, layers or packs that can hold enough food and water, he says. "When you compound those mistakes you can get into serious trouble pretty fast. The phone shortcuts a lot the (wilderness skills), instruction and equipment that you should otherwise carry or use."

John Bulmer is president of Adirondack Mountain Rescue, a 30-member volunteer rescue group based in Clifton Park that works with the New York State Federation of Search and Rescue Teams.

"There's an impression that cellphones work everywhere and that Google Earth has mapped every inch but cellphones don't work in every situation," Bulmer says. "You go to some trailheads and there's a phone number to call if you need help. People see this sign and think if I'm lost I can just call this number."

Technology fails, he says, and cellular coverage isn't universal. Hikers need a backup, and the ability to use it.

"We get accused of being Luddites," Bulmer says, "but it's not an irrational fear of technology. It's a plea to have redundancy when you go into the woods. You need a plan if your battery dies."

A compass is only as useful as the person holding it. "Everyone wants cool gear," says Bulmer. "But when you're under duress if you've never used it that's no good. If you've never started a fire in a damp environment, those fire-starting materials won't do you any good."

Since cellphones aren't going away, the question is what to do about them?

A new paper in The *Adirondack Journal of Environmental Studies* by Ethan Collins and St. Lawrence University Professor Peter Pettengill offers a starting place for analysis. The report analyzed DEC statistics from 2015-2016 to better understand the increase in search and rescue incidents with an eye toward potential solutions. In 2007, the report notes, 134 uniformed rangers handled 223 search-and-rescue (SAR) incidents and regularly patrolled 4,461,000 acres. In 2017, 135 uniformed rangers handled 346 incidents and patrolled 4,944,361 acres. That's a 54% increase in incidents per ranger from 2007 to 2017.

Rangers take a boy from a helicopter after a Mount Marcy rescue in 2018.

PHOTO COURTESY OF DEC

10 Essentials every hiker should carry every time

The American Hiking Society advises not leaving home without the following, no matter how short your planned hike.

1. **Appropriate footwear.**
2. **A paper map and compass.**
3. **Water, and a water purification method.** The AHS recommends carrying a half liter per hour for moderate terrain and temperatures.
4. **Food, beyond the amount required for the hike.**
5. **Rain gear, dry-fast layers and a warm hat.**
6. **Safety items** such as a flashlight (with backup batteries), a whistle, and matches to start an emergency fire and/or signal for help.
7. **First aid kit** and training in use of tourniquet and other items.
8. **Knife or multi-tool.**
9. **Sun protection.**
10. **Shelter and/or space blanket.**

The number of acres a ranger needs to patrol increased as well, from 33,291 patrolled acres per ranger to 36,624 acres.

"We wanted to see who was getting injured and how they were getting rescued, where the hotspots are," Collins says. "This way we can see how the Adirondack Park compares to other park systems in the U.S., and it can help mitigate morbidity for the rescuer and hiker. It can create a safer park in the end."

The areas with the highest rates of incidents include the High Peaks south of Lake Placid, the Lake George area, and the corridor between Indian Lake and Long Lake. Of 528 incidents, they found, 78% involved hikers and 42% involved people who were lost.

Search-and-rescue missions usually start when people in distress call the DEC directly or call 911. The DEC then dispatches appropriate units to conduct a search. Forest rangers are the primary responders. If the mission requires more assistance, then state police, environmental conservation officers, local fire departments, rescue squads and volunteers may be called in.

Rescues can include anything from rangers helping hikers walk out to vehicle evacuation and carry-outs, aircraft evacuation, technical or swift-water rescues and more. Besides slip-and-falls, the reasons for medical care fall in the following categories: exceeding ability, previous medical diagnosis, vehicle collision, cold exposure, suicide and drowning, according to the report.

Some observers advocate adding more rangers as one solution. Proponents say this would help reduce current ranger workload

and also enable rangers to do more education, which could prevent incidents generally. Adding 40 rangers would cost about $4 million, says Woodworth. "If we used a fraction of the New York tourism dollars used to promote the High Peaks, we could get our 40 rangers. Boots on the ground would help a lot."

A more controversial suggestion is to charge people for frivolous search-and-rescue missions, such as those that could have been avoided if the hiker had been better prepared. "Rescue professionals, their associations and unions are mostly against this because it may stop people who are injured and lost from calling," van Laer says. "That delay can be critical in life and death sometimes."

"We don't believe people should pay for rescues unless the decision to call for help is just so wanton," agrees Woodworth. "If you thought you would have to pay, you might delay calling for help until it made the search more difficult. Even a couple of hours delay can make a search and rescue more difficult and dangerous."

At the same time, the status quo is not sustainable, van Laer says. Rangers routinely work too much overtime. "It's having a deleterious effect on other aspects of the profession," he says, ticking off reduced educational presentations and boundary patrols as two examples.

Indeed, education might be the right approach. The National Park Service began its Preventative Search and Rescue program in the Grand Canyon National Park in 1997. Through the program rangers provide information and education to park visitors, discussing safe hiking practices and personal preparedness right there on canyon trails. The program has led to a decrease in search-and-rescue incidents and has begun to be used in other parks.

The DEC did a test run last Presidents' Day weekend in the High Peaks. Staff from ADK and volunteers from Keene-Keene Valley Backcountry Rescue joined rangers on the Cascade Mountain and Adirondak Loj trailheads as well as other areas to talk to hikers about their destination, gear, equipment and clothing.

According to the DEC, more than 100 hikers were encountered each day, at Cascade and about 40% of those were unprepared due to improper clothing or footwear. The DEC expects to continue the prevention program and Hike Safe initiatives in 2020.

In the meantime, van Laer offers this advice: "Don't rely on the cellphone as your primary tool. Think of it as a backup.

"It's not a Swiss army knife." ■

PHOTO COURTESY OF DEC

A Department of Environmental Conservation officer operates a drone.

Drones: An imperfect rescue aid

Cellphones and GPS locators aren't the only changes affecting wilderness users. Drones are also part of the ranger tool kit.

Bruce Lomnitzer, a full-time ranger since 1999, always brings one of his three drones with him when he's out in the woods. While he hasn't found a missing person yet with a drone, he says that's more about his ability to get to the right place to use them effectively rather than the drones themselves.

"The property we're covering is so large that it's not that the drone didn't do the job," he says. "It's just that I wasn't in the right place."

Drones can carry thermal imaging cameras that "see" the heat from a human, for instance, rather than everything else in the landscape. A drone can also carry a camera that takes multiple pictures.

Part of the drawback to using drones is the park landscape. The thick canopy of trees makes it hard for a drone to fly, much less capture consistent, useful pictures. Thermal imaging works best when the trees are leafless, for instance. "If there is a canopy of evergreens and the snow is over the top of the trees, you wouldn't see me under it unless I was moving," Lomnitzer says.

When he first began using drones, Lomnitzer thought they would take the place of humans. "The reality is that the type of searches we do in the Adirondacks are such big fields and areas that you'll never replace humans unless it can fly itself," he says.

Still, Lomnitzer feels sure drones will get their day eventually. Like cellphones, the technology is changing rapidly. "I'm sure there's somebody working on a program that instead of me looking for colors or images there will be a program that will see it."

Perhaps. Van Laer has a more wait-and-see attitude. "A drone is not going to carry someone off a mountain with a broken leg," he says. "Drones are like dogs—there's a limited scope where they're very useful."

–Janet Reynolds