

How to find your keys!

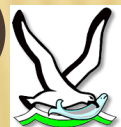
# SEARCH AND RESCUE

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# ED WOODRICK - BIO

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- ✘ Civil Air Patrol
  - + 21 “Finds” (aircraft, people, ELTs, balloons)
  - + Director of Communication, Southeast Region
- ✘ Fundamentals of Search and Rescue Course (NASAR)
- ✘ Managing the Search Function (NPS)
- ✘ Inland Search and Rescue Course (USCG)



# WHAT IS SAR?

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## ✘ Search

- + Looking for what is lost
- + Best performed with coordination

## ✘ Rescue

- + On site attention – First Aid
- + Extraction
  - ✘ Walking
  - ✘ Carrying
  - ✘ Helicopter

# DENNIS MARTIN SEARCH



GREAT SMOKY MOUNTAINS NATIONAL PARK  
JUNE 14 - SEPTEMBER, 1969

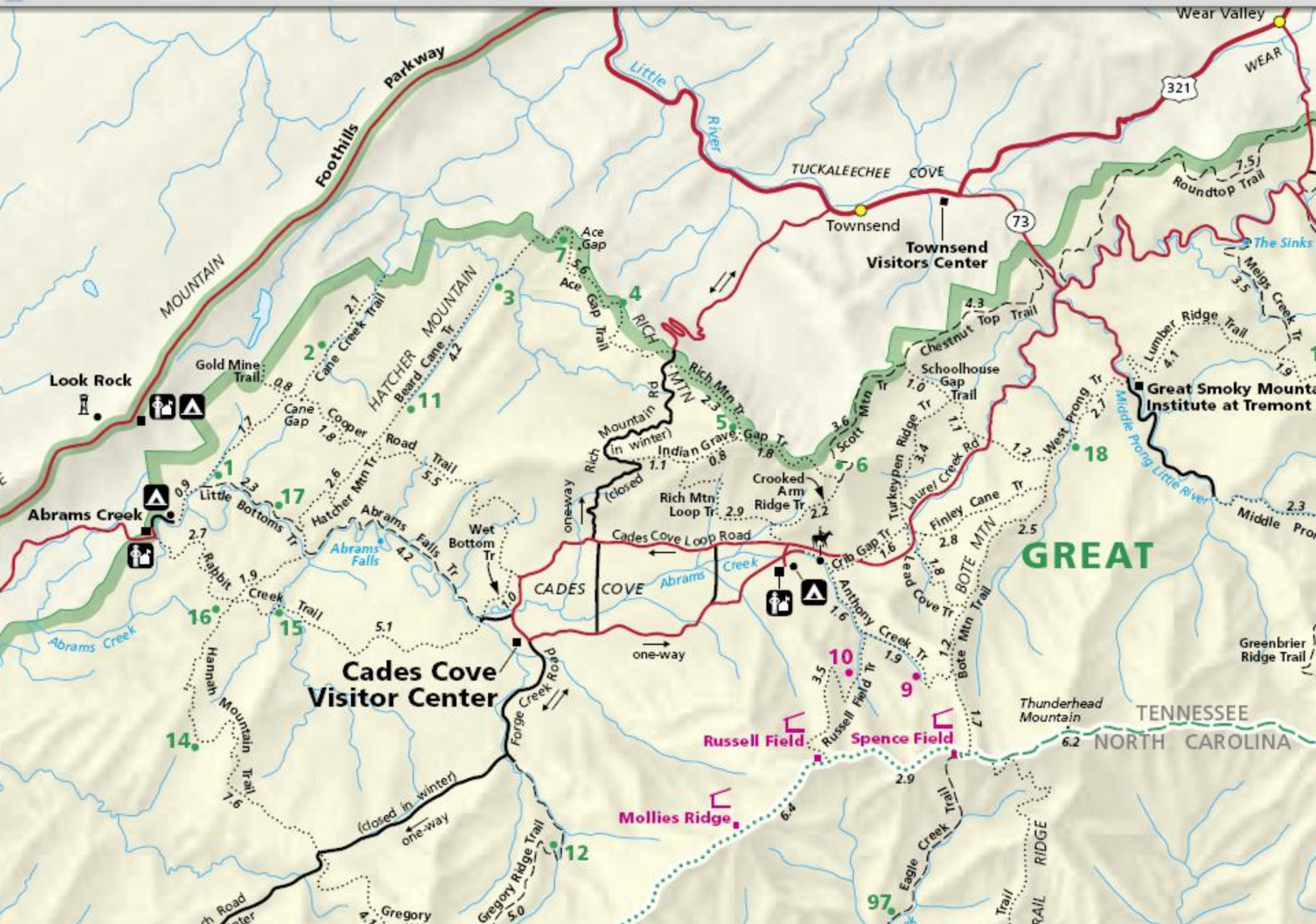
# DENNIS MARTIN SEARCH

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# DAY 1, SATURDAY, JUNE 14

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- ✘ Dennis Martin, 7 years old, was last seen at 4:30 p.m. in the Spence Field area on the Appalachian Trail. Initial information:
  - ✘ Last seen wearing a red T-shirt, short green trousers, and low cut oxford shoes with a simple heel.
  - ✘ He was a quiet boy and would not normally call out, but he would respond to his name being called, even by strangers.
  - ✘ He was in a special education group at school, his mental age was a half year behind his chronological age.
  - ✘ Dennis, his nine-year-old brother, and two other unrelated boys had been playing near the Spence Field area. This area consists of:
    - + Two shelters.
    - + The Appalachian Trail runs east and west through Spence Field.
    - + Two trails and one jeep road lead from Spence Field to other destinations.
  - ✘ His father later stated he began calling and looking for Dennis 3-5 minutes after he last saw him.
  - ✘ Some of the trails were quickly checked out by the father and grandfather.
  - ✘ The grandfather hiked out to report Dennis missing, arriving at the Cades Cove Ranger Station about 8:30 p.m.



# DAY 1, SATURDAY, JUNE 14 (CONT)

- ✘ Initial search actions after Dennis was officially reported missing:
  - + Family members and one other hiking group in the Spence Field area continued to search.
  - + Three rangers from Cades Cove checked the area, the trails from Cades Cove to Spence Field, and interrogated any hikers they found in the area.
- ✘ **ALL RESULTS WERE NEGATIVE, NO CLUES FOUND**
  - + A heavy rainstorm ( 2.5-inches) occurred at Spence Field at dark. All streams became high and turbulent.
  - + The three rangers and family members continued to search the immediate area the rest of the night.
  - + Chief Ranger notified at 8:40 p.m.
  - + The Park had no detailed search and rescue plan in existence.



# DAY 1, SATURDAY, JUNE 14 (CONT)

- ✘ Plans for the next day's search effort:
- ✘ Base Camp at Spence Field.
- ✘ Resources:
  - + 1 crew, 30 men with 5 leaders.
  - + 10 crews, 2-4 men each, and 10 leaders.
  - + A helicopter will be obtained if weather permits.
  - + Additional National Park Service personnel (NPS), local rescue squads, and a hiking club were contacted to provide manpower. They were asked to be at the Bote Mountain Road at 5:00 a.m.

# DAY 2, SUNDAY, JUNE 15

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- ✘ Weather is moderate.
- ✘ Nine jeeps and three trucks are used to transport searchers from the Bote Mountain Road to Spence Field, 7 miles away.
- ✘ Searches of these trails continued, and initial searches of drainages began as more search personnel arrived.
- ✘ All hikers and campers spotted in the area were interrogated.
- ✘ A large helicopter was acquired and was used to haul equipment for the base camp at Spence Field.
- ✘ **Total number of search personnel on day 2 was 240.**
- ✘ Poor coordination and inadequate food and water for the personnel involved.

# DAY 3, MONDAY, JUNE 16

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- ✘ The trail and drainage searches continued.
- ✘ Many areas searched again, especially the immediate drainages in the Spence Field area.
- ✘ An intensive grid search of Spence Field was conducted.
- ✘ A heliport was established at Cades Cove, and several military helicopters arrive.
- ✘ The news media arrives in force.
- ✘ 40 Special Forces troops, self-contained with communications, are requested.
- ✘ Hundreds of offers to help search were received from individuals and groups.
- ✘ Two bloodhounds arrive and are used during the day.
- ✘ Some overhead team coordinator positions were designated.
- ✘ The Red Cross establishes a food service operation for searchers at Cades Cove.
- ✘ **The total number of people involved on day 3 was 300, including personnel from the Park, the local rescue squad, the Air National Guard, and other volunteers**

# DAY 4, TUESDAY, JUNE 17

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- ✘ Rain continued in the area.
- ✘ Trail searches were extended, and field drainages were searched/re-searched again.
- ✘ Another heliport was established at Russell Field.
- ✘ The intensive grid search around Spence Field was expanded by adding 50 student searchers from a junior college.
- ✘ Additional NPS teams were alerted.
- ✘ 50 Tennessee Air National Guard personnel with two HH-52 helicopters arrive, and join the search effort.
- ✘ The north shore of Fontana Lake is patrolled and searched by boat.
- ✘ Another heliport was established at Cades Cove.
- ✘ The helicopters were unable to fly until 11:00 a.m. due to fog.
- ✘ Meals for searchers began to be served at a Job Corps Center.
- ✘ **The total number of searchers on day 4 was 365, including 149 people from 20 different county rescue squads, 40 special forces military personnel, 50 junior college students, 75 NPS personnel, and 51 assorted volunteers.**

# DAY 5, WEDNESDAY, JUNE 18

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- ✘ It rained during the previous night, and there is a 4,000 foot ceiling.
- ✘ Four helicopters are in the area, but are unable to fly due to weather.
- ✘ The grid search of Spence Field continued with 97 searchers.
- ✘ A fixed wing aircraft with a loud speaker system was requested. Upon landing at Cades Cove, the rear landing gear hit a rock and was knocked through the rear stabilizer, rendering the aircraft unusable. After repairs, it returned to its base.
- ✘ Small groups of searchers camped in various areas overnight (Tuesday), building large bonfires in hopes of attracting the boy.
- ✘ Large numbers of predictions by clairvoyants begin.
- ✘ An over-abundance of unsolicited food began to arrive, including a semi-truck/trailer of lettuce.
- ✘ 22 more Special Forces personnel arrive.
- ✘ An operations center for search activities is set-up at the Cades Cove maintenance building.
- ✘ The special forces establish a communications unit.
- ✘ **The total number of searchers on day 5 was 615.**

# NOTES FROM THE FIRST STRATEGY MEETING, WED, JUNE 18, 1969, 9:00 P.M. PARK HEADQUARTERS.

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## ✦ CHIEF RANGER:

- + Unable to transport men; Bote Mountain Road in bad shape.
- + Need more helicopters, at least two more.
- + Expect largest build up by Sunday.
- + Rescue squads not physically prepared, but doing their best.
- + Helicopters use jet fuel, not aviation gas. Losing time flying to base for fuel.
- + Reaching cut-off point on field operations on Tennessee side; should turn to North Carolina personnel for expansion of search personnel and area.
- + Don't worry about technical accuracy on grid search; keep men moving.
- + Helicopters nullify need for huge base camp at Spence Field.
- + What about sanitation in Spence Field?
- + Mud is more than wheel-deep on jeeps.
- + Diverting every volunteer into North Carolina, where the search will concentrate.
- + Another operations center in North Carolina? What about Hazel Creek dock? Fontana Dock?
- + Want reference map to show area covered daily so we can record areas covered and effort made.
- + If we ever have this situation again, we will have a press coordinator on the scene to deal with reporters.
- + FBI Agent Jim Ride checking Martin family background for possibilities.
- + Should pursue extra helicopter request; six or seven by Sunday?
- + If grid is negative, boy is somewhere in low country.
- + Tell select leaders to watch for circling buzzards and note any odors.

# NOTES FROM THE FIRST STRATEGY MEETING, WED, JUNE 18, 1969, 9:00 P.M. PARK HEADQUARTERS.

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- × ASSISTANT SUPERINTENDENT:
  - + Need to schedule normal daily work loads for personnel.
  - + When cut-off begins of NPS personnel, maintenance gets first priority due to heavier costs.
  - + We will have something going on this for weeks.
  - + Boy had been covering several miles, capable of covering several more miles.
- × NORTH DISTRICT RANGER:
  - + Impossible to keep records complete.
  - + When will contributions cease? Will we be prepared when they do? (food, etc.)
  - + Have plenty of jeeps now.
  - + Another rain will “kill” jeep road.
  - + Ten jeeps are maximum numbers for operations on jeep road.
  - + 200 persons about maximum for jeep transport.
- × PARK FORESTER:
  - + If boy got out of Spence Field, could he have mistaken Little Bald for the field?
  - + Special Forces intend to stay indefinitely.
  - + Helicopters not getting in to Spence Field today because of 4,000 foot ceiling. They could have landed at 3,800 feet. A few heath balds in the area may be available for helispots.
  - + Reluctant to do any extensive clearing on heath balds.
  - + Good helispot available near Haw Gap (heath bald) on Jenkins Trail Ridge.
  - + Need to designate the following positions:
    - × Plans Chief Operations Chief
    - × Ground Traffic Officer Air Traffic Officer
    - × Communications Officer

# DAY 6, THURSDAY, JUNE 19

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- ✘ All grid, drainage, and trail searches continue.
- ✘ Clairvoyant predictions increase and the Martins believe they are significant. The media has many of the predictions and public pressure is heavy to check all of them.
- ✘ All animal excrement found is checked, and all buzzards are watched.
- ✘ Use of airborne infrared sensing devices was discussed, but dismissed as impractical.
- ✘ The total number of searchers on day 6 was 690.



# DAY 7, FRIDAY, JUNE 20

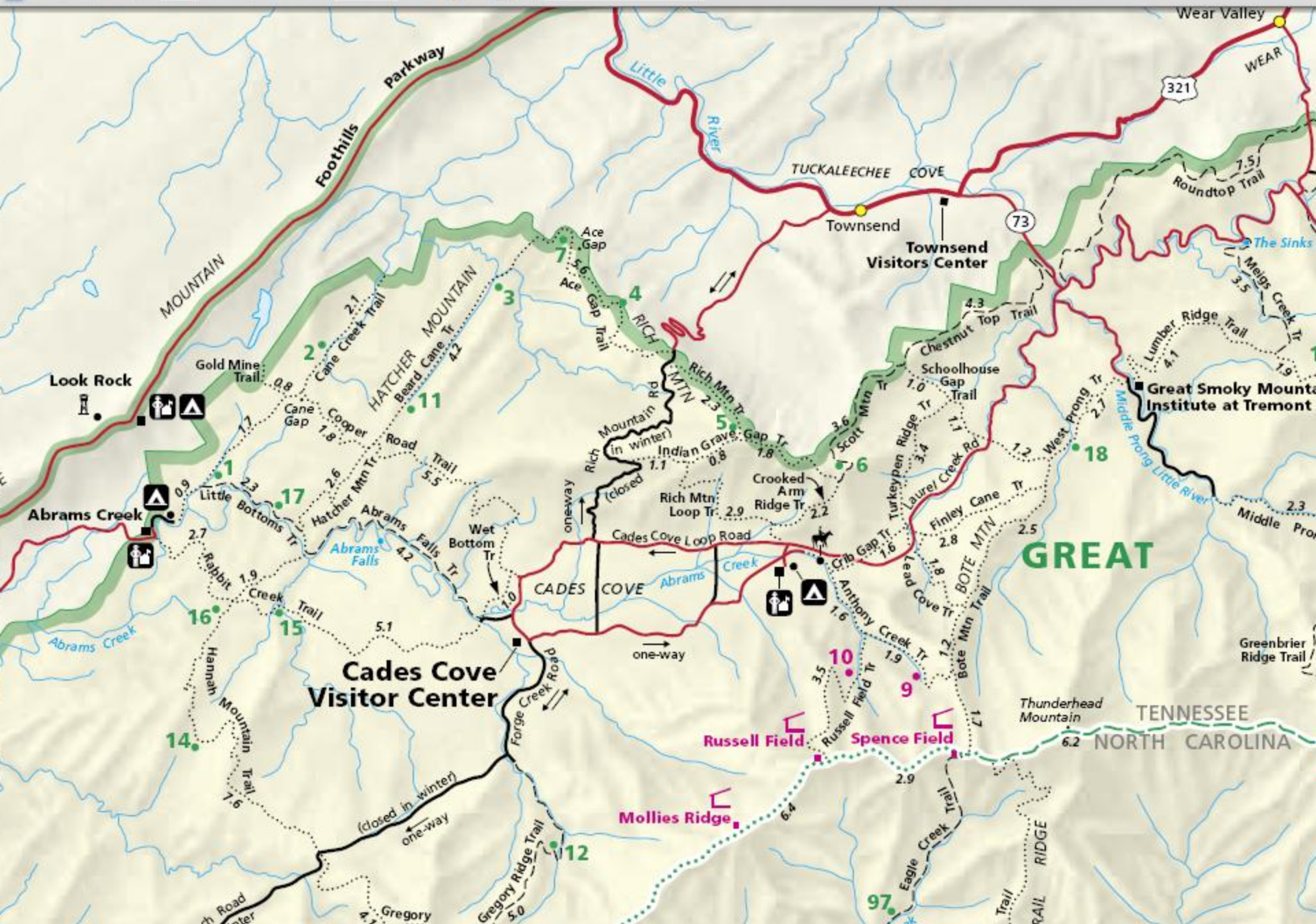
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- ✘ Additional NPS overhead team personnel arrived during the night.
- ✘ An additional 200 Army National Guardsmen are called in.
- ✘ All grid and drainage searches continue.
- ✘ There is continued, substantial pressure by the press, radio, and television media.
- ✘ **The total number of searchers on day 7 was 780.**

# NOTES FROM STRATEGY MEETING - FRIDAY, JUNE 20, 1969, 8:00 P.M., PARK HEADQUARTERS.

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- × NPS AND SPECIAL FORCES:
  - + Chief Ranger set up Plan A (if found alive) and Plan B (if dead). Under Plan A the boy would be taken by helicopter to the Knoxville Hq. of the U.S. Marine Reserves and then by ambulance to University of Tennessee Hospital. Under Plan B the Blount County Coroner should be notified.
  - + Instructions to finders of boy:
- × Determine if dead or alive.
- × Notify Chief Ranger by most expeditious means available and give: location in detail, dead (radio code 10-200), or alive (radio code 10-100-A).
- × Climb tree and set flag, build smudge fire, use smoke bomb (military only), or other signal for helicopter.
- × Stand by while Special Forces rappel a man in by helicopter and secure boy in litter if alive, or if dead, guard area until released by Chief Ranger or coroner.
- × Get name and address of person(s) who found boy.
  - + Plans Chief stated the top country was pretty well covered now. Additional helispots will be set-up at Russell Field, Thunderhead, Derrick Knob, Gregory Bald, Eagle Creek, Hazel Creek, and Fontana. An auxiliary operations center will be set-up at Fontana for the North Carolina operation.
  - + The Superintendent issued an announcement that the Laurel Creek Road will be closed at the Townsend “Y” over the weekend, and bona fide searchers will be transported from the “Y” to Cades Cove by bus convoys.



# DAY 8, SATURDAY, JUNE 21

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- ✘ A road block was established at the Townsend “Y” at 5:00 a.m. to control the entry of volunteers. The volunteers waited long hours in line, and many never did get into the search area and were very agitated. Two CH-47 "Chinooks" and four other helicopters airlifted 600 searchers to Spence Field.
- ✘ An area with a one mile radius from Spence Field (approximately 3 square miles) has been thoroughly searched. All immediate drainages have been covered, 250 feet up on each side.
- ✘ The total number of searchers on day 8 was 1400 from 35 different organizations.

# DAY 9, SUNDAY, JUNE 22

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- ✘ The road block for traffic control continued.
- ✘ Estimates of the total area searched were 56-3/4 square miles, with 13-1/2 square miles receiving intensive coverage.
- ✘ It was felt all logical search areas had been covered. Nothing was found. The decision was made to begin all over again on the morning of June 23. Search crews will start at Spence Field and research the entire area.
- ✘ **The total number of searchers on day 9 was 1,000. Volunteer turnout was lower.**

# DAY 10, MONDAY, JUNE 23

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- ✘ Heavy rains in the area.
- ✘ Helicopters unable to fly, and police dog was used with negative results.
- ✘ The total number of searchers on day 10 was 427.

# DAY 11, TUESDAY, JUNE 24

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- ✘ The Federal Bureau of Investigation continues their investigation.
- ✘ Two more dogs are used, with negative results.
- ✘ **The total number of searchers on day 11 was 482.**

# DAY 12, WEDNESDAY, JUNE 25

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- ✘ Press release issued stating the search operation will be greatly reduced as of June 26. If the boy is not found by June 29, the search will continue on a limited basis only for 60 days.
- ✘ The total number of searchers on day 12 was 463.



# DAY 13, THURSDAY, JUNE 26

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- ✘ The Martins phone the Chief Ranger stating they now feel Dennis may have been abducted, reference a particular individual had been camping in Spence Field when the boy disappeared.
- ✘ The total number of searchers on day 13 was 121.

# DAY 14, FRIDAY, JUNE 27

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- ✘ One of the Martin's neighbors in Knoxville had telephoned a Tennessee Senator asking for 300 Federal troops to search for a week. The White House was monitoring the search effort. The decision was to accept the Federal troops, if offered, largely due to the NPS being accused by a Tennessee Representative of not wanting or accepting outside help. These facts were considered in extending the search effort.
- ✘ **The total number of searchers on day 14 was 68.**

# DAY 15, SATURDAY, JUNE 28

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- ✘ The Park was notified that the family was considering offering a reward.
- ✘ Vulture activity over Sugar Cove was noted. It was discovered to be a dead bobcat.
- ✘ The total number of searchers on day 15 was 196.

# DAY 16, SUNDAY, JUNE 29

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- ✘ Search operations concentrated in an area from Spence Field to Russell Field.
- ✘ The operation was closed down by 6:00 p.m. All searchers and equipment were brought out of the area. The captain of a county rescue squad severely injured his back when he fell against the rear bumper of a refrigerated truck.
- ✘ **The total number of searchers on day 16 was 318.**

## **NOTES FROM STRATEGY MEETING - SUNDAY, JUNE 29, 1969, 5:00 P.M., PARK HEADQUARTERS.**

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- ✘ At 5:00 p.m., a meeting was held at the operations center with Mr. and Mrs. Martin, FBI Agent, Chief Ranger, District Ranger, and Sub-District Ranger. They discussed “where do we go from here?” Points discussed:
  - + Absence of evidence to support kidnapping, etc. FBI cannot launch a full-scale investigation, but investigation will continue; search will continue.
  - + Reward: up to the family.
  - + Chief Ranger assured Martin’s they are prepared to continue search 30-60-90 days with three of their best men, who also can handle volunteer searchers.

# PREDICTIONS, SUGGESTIONS, AND SUSPICIONS

# PREDICTIONS

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- ✘ From Jeanne Dixon, Washington, D.C.: “Look around area where boy was last seen playing. He went out on level ground, went down (was walking, did not stumble or fall) an incline and turned off to left at 40-50 degree angle and up a little, then went back down and would be underneath the point of incline. The area where he turned left has shrubbery and thicket. Did not see any trees where he veered off to left, more or less bare ground.”
- ✘ Harold Sherman, Los Angeles, California: “He will be found 2-1/2 miles to left of where last seen by father or brother. Fell off steep place. Hung up in bushes.”
- ✘ Jeffrey Owens, Gatlinburg, Tennessee: “Had dreams last two nights about lost boy. In dreams he is not very far from where lost. Night before last saw him lying on hill behind a log, but last night dreamed he had dragged himself down to the river for water.”

# SUGGESTIONS

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- ✘ There were numerous other predictions and suggestions, and the family was most receptive to these:
- ✘ **Suggestions**
- ✘ A Mr. Billy Noland, Psychic Interpreter of New Orleans, La., arrived on 6/25/69; talked with the family and headed for Rocky Top on the Appalachian Trail. Here without funds and equipment. Wants permission to stay in area for several days. Is sure he can find boy. (Without funds, food or shelter!)
- ✘ On 6/26/69 Carson Brewer of the Knoxville News-Sentinel called and forwarded a suggestion received from a lady telling us to start looking in trees and treetops – stop looking on the ground.
- ✘ Telegram received on 6/22/69 from Glen Chandler, Rt. #1, Mascot, Tennessee: “Take several friendly dogs including the boy’s own, put package containing food and plastic raincoat around their necks. Release dogs 1-2 miles apart. Be sure dogs are lost same as Dennis. By chance one may find his trail and follow him for friendship. Dogs could be released by helicopter. Thank You.”
- ✘ Info called in to Cades Cove store, caller unknown: “Two branches go through Spence Field and come together. There’s a hole. You have to step in it to know its there. Fern growing out of it.”
- ✘ Betty Phillips of Townsend, Tennessee, called to say a boy was seen by himself at Elkmont by a waterfall by Joe Jones who lives in a trailer court, first trailer on left marked private, at Walland. Turn right at King’s Grocery and cross bridge to trailer court. We can check this by calling Joe Makee, a preacher, at Walland.
- ✘ **ALL OF THE ABOVE WERE CHECKED AND RE-CHECKED: NEGATIVE RESULTS**



# MEMO TO CHIEF RANGER FROM SECRETARY:

- + “Issac Welch of the Indian Agency talked with me Sunday AM at the information desk about the possibility (don’t laugh) of using the powers of an old Indian he knows to locate Dennis Martin. The Indian is not a tracker, but possesses special power and, with these, has located people before. It would be necessary by jeep or plane to transport this man to Spence Field. If interested, phone Welch’s number.”

# SUSPICIONS

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- ✘ The Martin family had suspicions concerning several persons, especially during the latter stages of the search.
- ✘ (John Doe), Dandridge, Tennessee: Mr. Doe was one of the parties camped at Spence Field when Dennis was last seen. He stayed with Mr. William Martin during most of the search. A lady, unknown, claiming to possess extrasensory perception, had gotten in touch with Mrs. William Martin through the Miami, Florida, Police Department and told her that Mr. Doe should be watched. (FBI Agent checked on this lady.)
- ✘ Mrs. Martin felt that the lady in Miami and Mr. Doe, or others, could possibly have taken Dennis for reasons unknown.
- ✘ Carter Martin, other Martin camped at Spence Field: Could someone have gotten the two Martin families mixed up and “kidnapped” the wrong boy?
- ✘ As stated before the FBI has no evidence to start any large investigation on any of this. The fact should be noted the family may be avoiding acceptance of the possibility the boy will never be accounted for.

**WHERE DOES *ARES* FIT IN?**

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# ARES in Search And Rescue

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- ✘ Coordination
- ✘ Bridging Communication Gaps
- ✘ Additional Trained Bodies
- ✘ Technology Experts
- ✘ Staff Augmentation
- ✘ Janitors

# SEARCH PROCESS

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- ✘ Investigation
- ✘ Determine Priority
- ✘ Preliminary Search Area Establishment
- ✘ Implementation
  - + Initial Callout
  - + Hasty Search
  - + Confinement
  - + Review Tactics
- ✘ Rescue
- ✘ Recovery of Resources

# THEORIES OF SEARCH AND RESCUE

- ✘ Search is an Emergency
- ✘ Search is a Classic Mystery
- ✘ Search for Clues, Not Subjects
- ✘ Concentrate on aspects that are important to search success, under the control of a search manager
- ✘ Know if the subject leaves the area
- ✘ Grid search as a last resort

# SEARCH AND RESCUE RESOURCES

## RESOURCE EVALUATION

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- ✘ Availability
- ✘ Response Time after Notification
- ✘ Capabilities
- ✘ Limitations
- ✘ Qualifications
- ✘ Back-up Resources

# INVESTIGATION

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✘ Interviews



# PROBABILITY OF SUCCESS

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✘ Probability of Area

X

✘ Probability of Detection

=

✘ Probability of Success

# LOST SUBJECT BEHAVIOUR

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- ✘ Biological Cycles
- ✘ General State of Health
- ✘ Experience
- ✘ Physiological effects of the environment

# EXAMPLE PROBABILITY ZONES

Category	Hilly Median	Hilly Max	Flat Median	Flat Max
Children	0.3 down	1.6 up 2.6 down	1.2	0 - 2.2
Hiker	2.5 down	4.0 up 6.0 down	2.0	0 - 4.0
Elderly	1.2 down	1.0 up 3.0 down	1.0	0 - 3.0

# SEARCH AREA CONFINEMENT

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- × Natural Boundaries
- × Look Outs
- × Track Traps
- × String Lines

**QUESTIONS?**

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