

Staff Photo



1. Richard Bays..(kneeling).....Asst. Mgr. (GS-11) PFT (EOD 7/1/63)  
(following listed from left to right)
2. Harvie Fowler.....Adm. Asst. (GS-9) PFT (EOD 5/15/61)
3. Homer Blackwood.....Auto Mechanic (WG-10) PFT (EOD 11/7/51)
4. James D. Ammons.....Main. Worker (WG-6) PPT (EOD 12/17/79)
5. Faye Blankenship.....Clerk/Typist (GS-3) TPT (EOD 10/15/79)
6. Emmett Waldrep.....Biol. Tech. (GS-7) PFT (EOD 11/11/51)
7. Thomas Z. Atkeson.....Ref. Mgr. (GS-12) PFT (EOD 6/14/39)
8. Cecil Davis.....Biol. Tech. (GS-7) PFT (EOD 9/1/70)
9. Carolyn Garrett.....Park Aid (GS-2) PPT (EOD 10/9/79)
10. George Brown.....Public Use Spec. (LE) (GS-5)PPT(10/10/78)
11. Virgil McWilliams.....Tractor Operator (WG-6) PFT (EOD 8/28/72)
12. James L. Derden.....Soil Cons. (GS-11) PFT (EOD 7/1/63)

Review and Approvals

*J. Z. Otterson*

Submitted by

01-28-1980

Date

*James B. Tolbert* 2/4/80

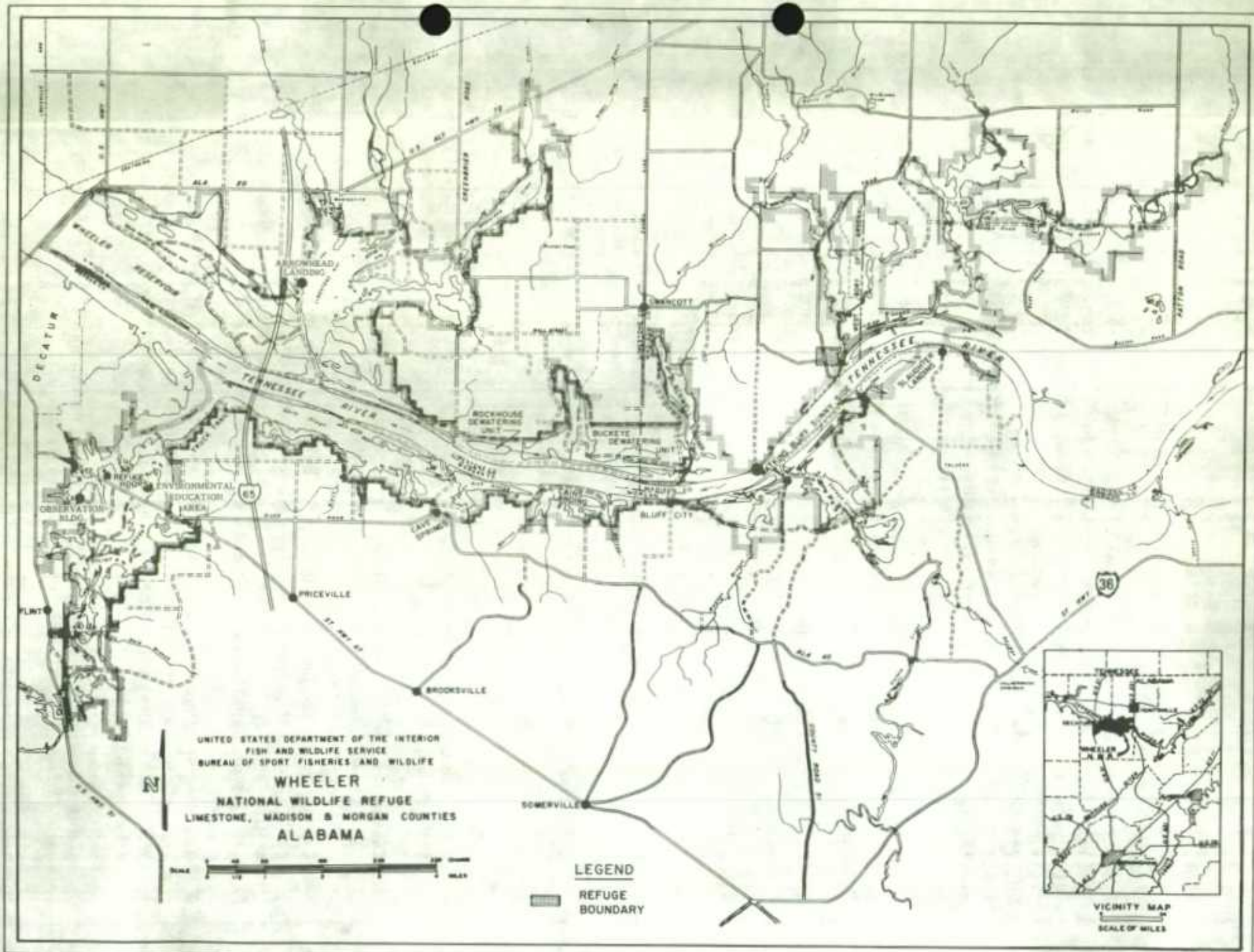
Area Office

Date

Wheeler National Wildlife Refuge

Regional Office

Date




UNITED STATES DEPARTMENT OF THE INTERIOR  
 FISH AND WILDLIFE SERVICE  
 BUREAU OF SPORT FISHERIES AND WILDLIFE

**WHEELER**  
**NATIONAL WILDLIFE REFUGE**  
 LIMESTONE, MADISON & MORGAN COUNTIES  
 ALABAMA



**LEGEND**

 REFUGE BOUNDARY





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## I. GENERAL

### A. Introduction

Covering approximately 34,500 acres of land and water, the middle third of Wheeler Reservoir, one of TVA's multipurpose impoundments. The refuge was established in July, 1938, largely as an experiment to determine whether power reservoirs could be made attractive to waterfowl. It is an overlay refuge with the land originally purchased by TVA, although fee simple title to all land above the 560 foot contour has since been transferred to the Service. The primary objective of the refuge is the provision of wintering area for migrant waterfowl. At its western end, part of the refuge lies within the city limits of Decatur, population 45,000, and its eastern end touches the city limits of Huntsville, population 160,000. Parts of the refuge lie within three counties, Morgan, Madison and Limestone.

### B. Climatic and Habitat Conditions

#### 1. Climatic Conditions

January was comparatively mild, and the coldest weather of the year came in February, when temperatures dropped as low as 10 degrees. Although there had been snow flurries in January and February, the only snow cover came in March when two falls covered the area completely, though coverage was brief. Spring came rather early and summer temperatures were mild. Fall temperatures through December were moderate and never dropped below 15 degrees.

Rainfall was light in January, but heavy in February, though there were no real floods. The first flood of the year came in early March and covered all lowlands with a second coming in mid-April and drowning some early planted crops. A third flood, a mild one, came in early June, covered the low lying fields and did much crop damage. The rainfall of the year was unusually heavy, averaging over 6 inches above normal. There were several cloudburst that dropped from 3 to 5 inches during a few hours, brought creeks out of banks and filled low basins.

Comparing the weather of 1979 with that of 1978, 1979 temperatures were much milder, but rainfall much heavier. The 3 floods of the year and frequent unusually heavy rains caused much crop damage, slowed field work and delayed the various construction projects that were underway.

#### 2. Habitat Conditions

In an effort to help energy shortages by passing all water possible through turbines, TVA held the reservoir at the full level much longer than had been the case in the past. There were no mud flats



until late November. This meant no covering of spikerush that normally provides early goose grazing and no flats available for goose resting and loafing. Again, lotus and longleaf pondweed showed considerable spread. Again, too, the mast crop was normal or above. Agricultural crop production suffered from overwet conditions with considerable corn acreage lost to flooding. However, final yields were above normal.

C. Land Acquisition

There were no land acquisitions or deletions during the year.

D. System Status

1. Objectives

This refuge receives funding under four major programs; Migratory Birds, Mammals and Non-Migratory Birds, Interpretation and Recreation, and Expenses for Sales. Migratory Bird enhancement is the primary objective and receives the highest priority in funding.

Current waterfowl maintenance amounts to approximately 8,250,000 use days. Under a NFIO situation, waterfowl maintenance would drop to 3,000,000 use days due to a sharply curtailed farming program and inadequate protection. Use days for other migratory birds will decline from 3,000 plus yearly to 1,000 or less.

The refuge has only a few bald eagles and ospreys passing through each year with none nesting. Current output for endangered and threatened species is 1,500,000 use days and is accounted for mainly by a colony of gray bats in a refuge cave. In 1977 this colony numbered 19,000, down from 170,000 in the early sixties. This decline is due almost wholly to human disturbance. With continued protection this colony will hopefully build back to its former size, but may be doomed otherwise.

Interpretation and Recreation is of considerable importance since this refuge is in the midst of a highly populated area and receives approximately 275,000 visits yearly. Trails, tour routes, exhibits and demonstrations, and other refuge programs amount to approximately 40,000 activity hours per year. A Wildlife Interpretive Center is presently under construction and will demand additional funding and personnel. A NFIO situation will seriously affect this program.

The Mammals and Non-Migratory Birds program receives less funds than do the other programs. Public hunts, field trials and similar programs will suffer slightly under a NFIO situation.

The Expenses for Sales program will not suffer unless funds become inadequate for salary and the small amount spent for equipment and supplies.

Refuge objectives were set in the fall of 1972 and are checked annually to determine their reliability. Some changes have been made annually

and a complete revision was made in CY 1977 and submitted to the Jackson Area Office. As usual, money and manpower limitations have been the limiting factor in preventing this refuge from reaching its objectives. We shall wait and see what BLHP does toward bringing the refuge to this point.

2. Funding

The following resume shows funding from FY 76 thru FY 80.

	<u>FY 76</u>	<u>TRANS. QTR.</u>	<u>FY 77</u>
WILDLIFE RESOURCES:			
Migratory Birds	144,000	15,000 (R) 37,600	174,000
Mammals and Non-Migratory Birds	3,000	600	59,000
Interpretation and Recreation	20,000	4,700	59,000
Expenses for Sales	26,600	6,600	26,600
	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>
WILDLIFE RESOURCES:			
Migratory Birds	166,700	172,000	193,000
Mammals and Non-Migratory Birds	20,000	22,000	31,000
Interpretation and Recreation	31,000	58,000	78,000
Expenses for Sales	27,000	27,000	7,000

Staffing levels have normally fluctuated from 8 to 11 permanent employees, with 11 on board now. Temporary employees include a Clerk/Typist.

II. CONSTRUCTION AND MAINTENANCE

A. Construction

The following major construction projects were either completed or begun during the year. These were:



1. The work begun under a BLHP job order in 1978 and involving the cleaning of the silt-clogged ditch systems of both the White Springs and Rockhouse-Buckeye dewatered units was completed in early December, 1979. Under this job order, the clearing of the Rockhouse-Buckeye ditch system was resumed in late June, after the dewatered pump down. Completing the dragline work, efforts were centered around leveling the resulting spoil piles. Completing this in the Rockhouse-Buckeye Unit, machinery was shifted back to the White Springs Unit and the old spoil piles from the 1978 ditch cleaning there were leveled. All this work was much slowed by the overwet conditions throughout 1979, but was finally completed in December.



Spoil piles were leveled after the cleanout of the dewatered ditch system was completed.

2. The construction of the Wildlife Interpretive Center under a BLHP job order was scheduled for completion in August, 1979. However, a semi-final inspection in September revealed a number of deficiencies that required contractor corrections. By the end of the year, the contractor was still involved with this and no final inspection had been held. The decision was made to eliminate the original plans for a deep well water system and a package sewage treatment plant and to proceed instead with a hookup to the City of Decatur water and sewage systems. By the end of the year, hookup with the city water lines had been completed and some progress made with sewage lines, although this latter has been held up by difficulty in procuring lift pumps. In late summer, the contract was let for the paving of

walkways and parking areas. By the end of the year, this had been virtually completed, although a final inspection had not been held. Efforts were made toward contracting for the exhibits of this building, but this has been held up by a contractor protest to GAO. No steps have been taken toward landscaping to date, since this must wait for a final inspection of the paving contract.



Aerial view of Wildlife Interpretive Center (WIC) nearing completion.

3. Under a BLHP job order, the reconstruction of refuge headquarters was begun in September and involves the replacement of all present headquarters buildings, except the two residences. By year's end and despite overwet conditions, good progress had been made on this. The new office had been framed and part of its storm sheeting and roof decking installed. Base slabs had been poured for the oil and paint storage building, warehouse building and the shop and garage.
4. Under a BLHP job order, work on the new control structure, located near the mouth of Limestone Creek, was also begun in September. By the end of the year, this had been completed and was functioning.
5. Using rehabilitation funds, 1,035 tons of riprap material were purchased and the fills to two additional small islands were widened. This completes this project, begun in 1978, to rehabilitate the small island fills.





Aerial view of Headquarters showing original buildings and new buildings under construction.



This new control structure was completed and functioning before the end of the year.

6. Using station funds and YACC labor, the construction of the boardwalk across the Cypress Pond south of the Interpretive Center was completed. Later it was stained to blend it better with surroundings. A new walking trail was laid out and fine graveled from the Interpretive Center site, across this boardwalk, then swinging in a wide arc back to the WIC parking area. A small pond was dug nearby to display aquatics. Using YCC labor, a small rest shelter was built mid way the trail. At the end of the year, refuge and YACC personnel were transplanting a wide variety of wild trees and shrubs along this trail.



The Cypress Pond Boardwalk nearing completion. This structure was completed and stained during the year.

7. The new woodland environmental trail through parts of the Dancy Bottoms was completed, fine gravel placed on it through wet areas, proper signs erected, etc.

#### B. Maintenance

Major acquisitions of the year included purchases of a Ford truck tractor, Model 9,000, a TD-15 crawler tractor with dozer blade, a projector and a large screen for the WIC building, a manual typewriter, a Pentax 35mm camera, 2 chainsaws, a tape recorder and a slide storage cabinet. A 1971 Chevrolet van was transferred to Wheeler from the Catahoula NWR for YCC and YACC use, though no new vehicles were received during the year.



These acquisitions were balanced by the disposition of the 1956 International truck tractor and the D-7 Caterpillar tow tractor through exchange sale. The TD-18 bulldozer was transferred to Noxubee NWR, the Worco motor grader to the Hillside NWR, 3 portable radios and a fire plow to the U. S. Forest Service, a fluid process duplicator to the National Park Service, a 3-M coping machine to the Carbon Hill NFH and 4 pairs of binoculars to the St. Croix National Scenic Riverway. As usual, refuge boundaries and roads required considerable maintenance. 1,149 tons of gravel were purchased and used to reinforce weak spots in the road system. A section of the new road around the eastern side of Blackwell Swamp, constructed in 1978, proved too low and this was raised by hauling in additional earth, then regraded. Numerous culverts were placed in the road system and new lines installed. Constantly eroding river banks threaten roads and fields and 126 tons of riprap material were bought and placed on problem areas. Beaver activity required constant attention to keep dewatered ditches and road culverts functioning. Beaver guards were constructed and placed on problem culverts. The outside wooden trim of several of the headquarters buildings were repainted. The motor of one of the Ford  $\frac{1}{2}$  ton trucks was completely reworked and there were many repairs, replacements and much welding done to mowers, tractors, farm implements and vehicles. All maintenance work here is by forced account.

C. Wildfires

With overwet conditions throughout the year, not a single wildfire occurred.

III. HABITAT MANAGEMENT

A. Croplands

There was much loss of acreage and water damage to crops from the two floods that came during the growing season and from heavy green worm attacks on soybeans and grain sorghum. Forty-two cooperators were used to keep 5,559 acres in various forms of agricultural production. Although corn acreage was lost to flooding, the final production acreage was still slightly above the 1978 figure. Comparing 1979 crop acreage with that of 1978, the soybean and wheat acreages were virtually unchanged. The grain sorghum acreage increased by approximately 11%, while the millet acreage declined about 20%. A small amount of buckwheat, 27 acres, was planted in 1979. Due probably to a generous amount of rainfall, 1979 production exceeded that of 1978 by over 20% and totaled 164,984 bushels of grain and seed. Of this, 57,741 bushels were made available to waterfowl and other wildlife. A gratifying increase of almost 25% above the 1978 figure. On the other hand, the acreage of good green forage dropped about 25% below the 1978 figure and amounted to only 1,132 acres despite refuge efforts to bolster this. To supplement the efforts of cooperators, refuge personnel and machinery planted 243 acres of browntop and Japanese millet, 27 acres of buckwheat and 120 acres of green stuff, mainly wheat.

B. Grasslands

Again, both hay and pasture acreages dropped sharply compared with 1978, reflecting the trend toward increase row cropping. There were only 346 acres of pasture and 266 acres of hay in 1979. From this, 141 tons of hay were harvested by cooperators and pasture provided 1,210 AUM's.

C. Wetlands

The 1978 ditch cleaning in both dewatered units payed dividends in better production during the 1979 crop year. This was especially important, because the years was overwet, and crops on much of this lowland would have been lost otherwise. Both ditch cleaning and spoil pile leveling were completed in 1979. Although funds have previously been transferred to TVA to cover the replacement of one of the worn out pumps of the White Springs Unit, TVA experienced difficulty in getting delivery and the replacement has not yet been made. Refuge personnel and machinery planted millet and buckwheat on all open dewatered acreage not row cropped by cooperators. Emphasis was given to willow control and good progress made. This not only involved willow cutting by YACC, YCC and refuge personnel, but a large Klearway machine was rented and did good service.



This Klearway machine was rented and used for willow removal.





Taken from the identical location, this photo shows the effects of the Klearway machine use.

D. Forestlands

There were no woody plantings during the year, other than wild stock transplanted on headquarters and around the new WIC trail. With continuous overwet conditions, there was no planned burning. A single timber sale was held during the year and involved a limited clear cut on the Redstone Arsenal portion to clear a viewing area for missile tracking. This removed 303,000 BF of pine and 214,000 BF of hardwood sawtimber and brought \$64,736.86.

IV. WILDLIFE

A. Endangered and/or Threatened Species

The closure of the Cave Springs Cave continued throughout the year. A June check by Dr. Merlin Tuttle indicated that the gray bat colony there had increased from the estimated 20,000 in June 1978 to approximately 23,000 in June 1979. This, according to Dr. Tuttle, is a gratifying increase and in line with the breeding potential of the species.

There were 3 immature bald eagle sightings in January, all probably involving the same bird. However, a mature bald eagle was noted twice in April. Sightings resumed in November and there were a number in December. These are known to have involved at least 3 individuals, 2 immature and 1 mature. A golden eagle was sighted in January and there were 2 such sightings in November.

A lone peregrine falcon was sighted in October, evidently a bird passing through. Osprey sightings for the year were without change from those of recent years, involving several birds passing through during spring and fall migration.

Beginning in May, two rather large alligators were sighted regularly in Flint Creek south of the headquarters. Others were reported sighted on refuge parts of the Redstone Reservation. On June 22, and with the full knowledge and consent of Area Office officials, 55 alligators from the Lacassine NWR, part of a general area wide release from excess at that refuge, were turned loose in the more isolated portions of this refuge, north of the Tennessee River. Local news media gave much coverage to this and the local reaction was almost unanimously favorable. One alligator was shot by a fisherman shortly after the release. However, a local congressman took exception to this and we are presently under orders to remove them when they emerge from hibernation. However, there has been much local publicity in favor of keeping them here.



*A Real  
Boo-Boo*

Fifty-five alligators from Lacassine Refuge were released in five isolated portions of the refuge on the northern side of the River.



## B. Migratory Birds

### 1. Waterfowl

The 47 whistling swans that were present in late 1978 remained until February 24, 1979. Only a single bird reappeared in the fall, a whistler first noted on December 7 and that remained until the end of the year.

The first air count of the year, January 3, showed 28,500 Canada and 1,400 snow geese. The peak was reached on January 15, when the count showed 29,500 Canada and 1,350 snow geese. Counts begin dropping sharply after this. The usual 2 or 3 dozen crippled birds remained through spring and summer, with the first solid evidence of Canada goose nesting in the history of this refuge. One pair was noted with a single gosling, another pair with two. Canada goose fall arrivals were much earlier than usual with the first incoming flocks noted on September 8. Air counts showed goose numbers well ahead of those of 1978 until December when the count begin to flatten out. The last count of the year showed only 27,000 Canada and 2,000 snow geese. In short, the fall peak dropped below that of 1978 by about 1,500 birds. Hunting success was good during the January portion of the season, but disappointingly low throughout the fall portion. Banding success improved considerably with 470 Canada geese, and 15 snow geese banded during the year.

The first air count of the year on January 3 showed 38,000 ducks present. This number had climbed to a peak of 43,000 by the January 15 count, but begin dropping sharply after that. Warm weather duck use was normal. With a record 553 wood duck nest boxes available for use in late winter, the fall check showed that slightly more than 60% had actually been used by wood ducks, a slight but gratifying increase over that of 1978. As was the case with geese, fall duck numbers showed increased over 1978 figures until they flattened out in mid-December with a peak of 43,000, slightly above the 1978 fall period.

Hunting success in surrounding area was only average. There were 141 young wood ducks banded in late summer, 923 mallards and 350 black ducks banded in late winter.

### 2. Marsh and Water Birds

Two white ibises were present in July and August, but other wading bird species were commonplace. As usual, numbers were low and there was no nesting. All rail species seem in below normal numbers.

### 3. Shorebirds, Gulls, Terns and Allied Species

Local woodcock nesting seems to fluctuate sharply. Auburn graduate students investigating this in late winter and early spring found only a single nest and no broods in contrast with the reasonably

high nesting incidence of 1978. Snipe numbers appeared fully normal and little changes were noted among other shore bird species. Gulls seemed especially numerous during the latter part of the year. Over 400 Bonaparte's gulls, an unusually high number for our area, were present in December. Although 5 species of terns visit here rather regularly during the warmer periods, they are never numerous.

4. Raptors

Barred owls, once common here, but greatly reduced in recent years by DDT poisoning, seemed to be recovering. Both Cooper's and sharp-shinned hawk also seem more numerous. Red shouldered hawk continue almost absent, no doubt DDT victims. Red tailed hawks and kestrels continue our most numerous hawk species. Vultures, and especially turkey vulture, seem slowly recovering and there was a large roost located off the refuge, the first local roost in many years. No changes were noted among other raptors.

5. Other Migratory Birds

Mourning dove numbers seemed improved and fall hunting was better than in 1978. Double crested cormorants are definitely returning, though numbers are still far below those of 30 years ago. Due to the two-mile elevated stretch of Interstate-65 across the refuge and the heavy domestic pigeon nesting there, these birds are becoming common on the refuge. Cliff swallow nesting is increasing. No new birds were added to the refuge list during the year. This list was revised and reprinted and now includes 291 species.

C. Mammals, Non-Migratory Birds and Others

1. Game Animals

Again, white tailed deer seem increasing slowly but steadily. Beaver, raccoons and opossum numbers continue high. Squirrel and rabbit numbers remain low. Perhaps the most interesting change among local mammals is the dramatic increase in the number of coyotes. Local coyotes seem large, vigorous and are usually of a grizzled, grayish brown color.

2. Other Mammals

Although local skunk numbers continue rather high, no changes were noted among other mammal species. Improved fur prices, and particularly the increased prices for raccoon pelts, has brought increased pressure on the refuge from trespass trapping, trespass hunting, and fur spotlighting.

3. Resident Birds

The overwet conditions throughout 1979 almost certainly resulted in poor quail and wild turkey production. No changes have been



noted among other resident birds. Members of the black bird group continue super abundant. The December Christmas Bird Count resulted in an estimate of over 7,700,000 members of this group, plus starlings, using the refuge. The crow estimate exceeded 10,000 and there is no doubt that crows and black birds take a substantial part of refuge crop production.



A number of albino birds and mammals have appeared on Wheeler, but this snow white raccoon was a first of its species.

#### 4. Other Mammals

No changes were noted among reptiles, amphibians or other refuge animal life during the year.

### V. INTERPRETATION AND RECREATION

#### A. Information and Interpretation

##### 1. On Refuge

On January 19, Outdoor Recreation Planner Janet Self resigned to take private employment. Ms. Carolyn Garrett continued to do yeoman's service as Wheeler's only I&R employee, competently caring

for visiting groups, wildlife tours, nature walks, radio and television appearances and the majority of the off-site programs. She operated on a 700-hour, GS-4 Public Use Technician appointment until, on October 9, she was given a permanent part-time, 16-hour weekly, Park Aid GS-2 appointment. Efforts to procure more permanent full-time I&R personnel have been fruitless to date. By prearrangement, 141 school, scout, church, garden club and other groups totaling 4,015 individuals visited the refuge during the year. This represents a decline in the number of visiting groups of about 6% and in the number of individuals of over 20%, probably reflecting gasoline shortages and high gasoline prices. Groups were given waterfowl tours, nature trail walks, examination of displays, lectures, slide and film showings. Probably for the same reason, general visitation dropped from near the half million mark to only slightly over 274,000. As usual, fishing use lead all the rest. The Waterfowl Observation Building was kept open on weekend and holiday afternoons throughout January and February, and reopened in late October and kept so until the end of the year. By actual head count, 5,201 individuals visited it in 1979. However, this was a decline of 22% below 1978 usage. There was regular use made of the viewing platform on Beaverdam Peninsula, especially during the fall, of the Environmental Trail, of the new Dancy Bottoms Woodland Trail and of the headquarters nature trail, although use of this latter certainly suffered after headquarters construction began in early fall. There were 4 coon dog field trials and 4 public hunts, in addition to deer hunting on the Redstone Reservation and to Tally-Ho fox hunting. The night, bow deer and rabbit hunts were liberalized and lengthened. In addition to the establishment of the new Dancy Bottoms Woodland Trail and the new trail connected with the interpretive center, improvements were made to existing trails. Sound and projection equipment were purchased for the new interpretive center as well as some visual aid equipment for general use. Carolyn Garrett attended the Media Rendezvous held in September at Logan, Utah.

## 2. Off Refuge

Refuge personnel gave 29 off-site interpretive programs, most of these to school, scout, church and civic groups and to garden clubs. Normally, they included talks and film or slide showings. In addition, personnel attended 35 off-site meetings and often participated in them. These involved a wide variety of subjects, though many dealt with the local DDT situation and efforts to remedy it. Refuge waterfowl, interpretive center and headquarters construction and the controversies over the DDT situation and alligator release attracted the attention of news media and resulted in numerous mentions of the refuge and radio broadcasts, telecasts and newspaper and magazine articles. A documentary film to be used on cable TV was made on the refuge and the magazine "Southern Living" spent much time with its photographers and plans for a full spread concerning the refuge and its waterfowl in the November, 1980 issue. Refuge employees helped many media members obtain background material,



photographs and film footage. In addition, the refuge itself made 3 special news releases and continued the regular weekly outdoor column, now used by five local newspapers.

B. Recreation

1. Wildlife Oriented

As usual, the fall and winter waterfowl concentration, the show of spring blooms and the show of autumn colors attracted many visitors. Fishing continued the single heaviest public use. There was heavy participation in the 4 public hunts plus tally-ho fox hunting and the gun deer hunting on the Redstone portion. General nature study, bird watching and wildlife photography continued popular. Although there was a definite decline in all forms of public use compared with that of 1978, this is attributed partly to overwet conditions throughout the year, partly to increased gasoline prices and gasoline shortages.



This 200 pound, 11-point buck was the largest taken on the bow and flintlock hunt.

2. Non-Wildlife Oriented

Although the refuge has made an effort to discourage these uses, swimming, water skiing, pleasure boating and picnicking continued heavy throughout the warmer months. Efforts toward controlling

off-road vehicle use continued with some success. The efforts of the Public Use Specialist, Law Enforcement, throughout the year certainly contributed to improved visitor safety and to a reduction in misuses of various types.

C. Enforcement

As usual, heavy patrol was maintained until waterfowl concentrations broke and scattered in later winter, then was resumed in late October and continued until the end of the year. A constant patrol was maintained throughout the year by George Brown, Public Use Specialist, Law Enforcement. Although better fur prices brought increased pressure from illegal trapping and fur spotlighting, the pressure from violations was lighter than usual and fewer cases were made. Only 5 cases involving hunting or firearm possession were made on the refuge, though 9 additional cases involving cane or wood cutting and off-road vehicle use were made. Two cases were made outside the refuge involving over-limit dove killing and failure to possess a waterfowl stamp. Assistant Manager Richard Bays and Public Use Specialist George Brown attended the full Federal Law Enforcement Training Course at Glynco, Georgia and Biological Technician W. C. Davis completed a refresher course there.

VI. OTHER ITEMS

A. Field Investigations

Although no direct field investigations were conducted by refuge employees, the refuge did provide cooperation in the following studies:

1. Cooperation with Dr. James Flemings, Patuxent Research Center, in the procurement of mallards, wood ducks and wood duck eggs in efforts to determine the seriousness of local DDT contamination among waterfowl.
2. Cooperation with the Corps of Engineers and TVA in obtaining samples of terrestrial wildlife, i.e. water snakes, snapping turtles, muskrats, short-tailed shrews and green herons, in an effort to determine the degree of DDT contamination among terrestrial species.
3. Continued cooperation with TVA in a wood duck nest box height preference study.
4. Cooperation with the Cooperative Wildlife Research Center, Auburn University, in a predator incidence study.
5. Continued cooperation with Auburn University graduate students in determining the incidence of local woodcock nesting.



B. Cooperative Programs

With its land administered partly by the U. S. Fish and Wildlife Service, partly by TVA, the Department of Defense, and the National Aeronautics and Space Agency, the refuge continued close cooperation with all. Cooperation was continued with Redstone Arsenal and its efforts to hold down problem deer numbers through public hunting and beaver problems through trapping. Again, space for bivouacs and field problems was made available to local National Guard Units. Full cooperation was given the Boy and Girl Scouts by providing space for day camps, individual group campouts, foot and bike hikes and for one large district camporee. Cooperation was given the Lurleen Wallace Development Center, a State mental institution, by providing day camp space and fishing opportunities for the mentally retarded. Cooperation was shown local rest homes for the elderly, 13th Place for runaway children, etc., by hosting frequent visits from these. Cooperation was also shown local churches by providing space for day camps, an Easter egg hunt, hayrides, youth campouts and by hosting group visits. The refuge continued to cooperate with the U. S. Geological Survey in the maintenance of a groundwater test well. A considerable number of wildlife specimens found dead on the area was donated to local schools and colleges. Help was given a number of students with the preparation of term papers dealing with wildlife and wildlife problems. A YACC program was maintained throughout the year and a YCC program from early June to late July.

C. Items of Interest

The following items may be of interest and have not been covered above:

1. Personnel actions during the year included the resignation of Outdoor Recreation Planner Janet Self on January 19, the appointment of Carolyn Garrett, who has been hired as Park Use Technician, GS-4, 700-hour to permanent part-time status, 16-hour weekly, as a Park Aid, GS-2, on October 9, the appointment of Faye Blankenship as a Clerk/Typist, GS-3, 700-hour appointment on October 15 and the appointment of James Ammons as Maintenance Worker, WG-6, 50-week appointment on December 17.
2. Although the majority of this report was prepared by the manager, the System Status section was prepared by Assistant Manager R. M. Bays and Administrative Assistant H. L. Fowler. All photographs are by R. M. Bays. The narrative typed by Faye Blankenship.
3. Again, refuge employees located several stolen cars that had been abandoned on the refuge and reported these to proper authorities. The fact that there is now year around patrol by the Public Use Specialist, Law Enforcement, seems reducing use of the refuge area by the criminal element.

D. Safety

There were no lost time accidents involving refuge personnel during the year and only minor accidents to YCC and YACC enrollees. There were no vehicle accidents. Regular monthly safety meetings were held for permanent personnel, usually involving guest speakers, film or slide showings. Constant safety meetings were held for YCC and YACC enrollees. All applicable safety equipment is on hand.



BLOWING WIND CAVE NATIONAL WILDLIFE REFUGE  
Decatur, Alabama

ANNUAL NARRATIVE REPORT  
Calendar Year 1979

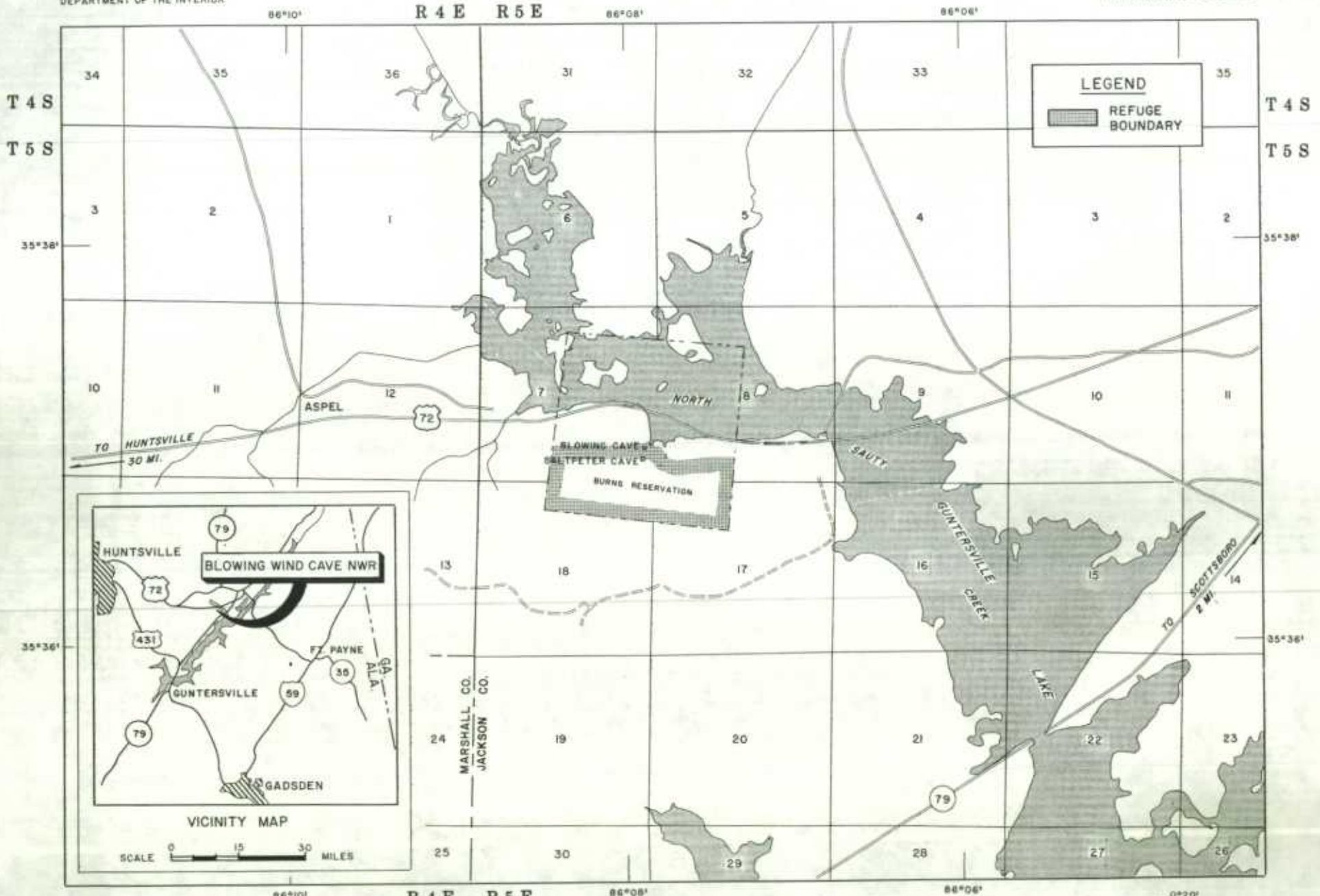
NATIONAL WILDLIFE REFUGE SYSTEM  
Fish and Wildlife Service  
U. S. DEPARTMENT OF THE INTERIOR

# BLOWING WIND CAVE NATIONAL WILDLIFE REFUGE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

JACKSON COUNTY, ALABAMA

UNITED STATES  
FISH AND WILDLIFE SERVICE



**LEGEND**

REFUGE BOUNDARY



COMPILED IN THE DIVISION OF REALTY  
FROM SURVEYS U.S.G.S.

ATLANTA, GEORGIA AUGUST 1977



TRUE NORTH 0°20' MAGNETIC N. MEAN DECLINATION 1977

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## I. GENERAL

### A. Introduction

Established in 1978, the Blowing Wind Cave National Wildlife Refuge consists of 264 acres of hillside located in Jackson County, Alabama, about 7 miles west of the county seat and small city of Scottsboro. It lies just above the Sauty Creek embayment of TVA's Guntersville Reservoir. Approximately half its boundary is contiguous with that of the Sauty Creek State Waterfowl Refuge. Its salient feature is a huge cave with entrances at two levels. This houses what is said to be the largest summer gray bat concentration east of the Mississippi River, plus much smaller numbers of hibernating Indiana bats, both endangered species.



Barricade at lower cave entrance.

### B. Climatic and Habitat Conditions

#### 1. Climatic Conditions

Conditions are much the same as those at Wheeler Refuge proper. January was relatively mild and dry, February was cold with two heavy snows and several lighter snow and sleet falls. The remainder of the year was mild with above normal rainfall.



C. Land Acquisitions

As we understand the situation, this tract came under Government ownership through a Declaration of Taking. The fair value offered by the Government is presently being contested in court by the former owner. No additional acquisition is anticipated.

D. System Status

1. Objectives

This newly created refuge receives funding only under the Endangered Species program since its sole function is to protect a colony of gray bats which now numbers approximately 285,000 individuals. Human disturbance in past years has greatly reduced the population of this colony and changed it from a maternity to a bachelor colony. By closing the cave's entrances to human activity this colony should once again return to maternity status and hopefully attain its former population of 500,000.

Other possible endangered species may include a green pitcher plant. At this point no other objectives have been planned for this refuge.

2. Funding

FY 1979

No funding advice was allotted to this station this year although \$1,630 in salaries were redistributed from Wheeler's program to the Area Office. The Regional Office expended \$1,050 for two signs. A contract was awarded in the amount of \$15,000 to erect two steel barricades for the two entrances.

FY 1980

Endangered Species----\$3,000.

II. CONSTRUCTION AND MAINTENANCE

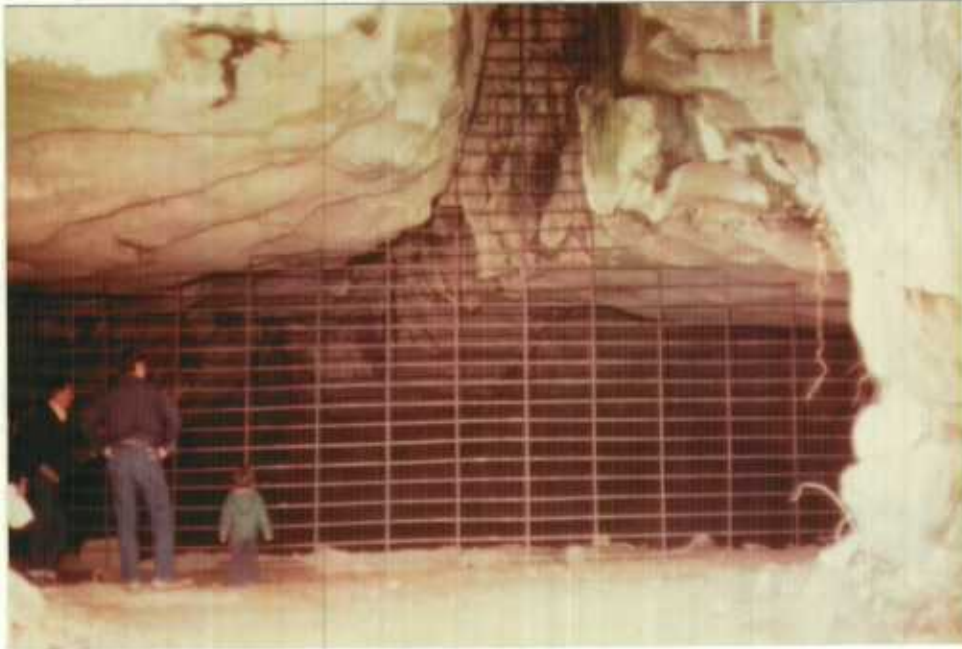
A. Construction

The following construction was completed during the year.

1. By contract, steel barricades were erected across both entrances. Considerable refuge employee and YACC time was spent removing a large earth mound at the lower barricade site and trenching for the upper barricade. Later, the former owner claimed an old saltpeter vat inside the upper entrance and refuge employees were forced to cut open this entrance to permit removal of the vat, then, welded it shut again. With much obvious intrusion over the

lower barricade, refuge employees constructed metal extension arms and topped this with strands of barbed wire. Later, they were forced to remove this because it caused bat casualties.

2. By contract, two large informational signs were constructed. Refuge employees installed one of these behind each barricade. Later, they were forced to move and reinstall them because they were impeding air flow and bat passage.



Barricade at upper cave entrance.

B. Maintenance

There has been evidence of continuous trespass. Barricades have been damaged with crowbars and hacksaws. Refuge employees have continually repaired these. A locked cable was placed across the road leading to the upper entrance to discourage trespass.

C. Wildfires

None.

### III. HABITAT MANAGEMENT

A. Croplands

None present.



B. Grasslands

None present.

C. Wetlands

None present.

D. Forestlands

The tract seems not to have been logged in the past 40 years. Hill timber is rather scrubby, though there are large trees in cove areas. There is no indication of trespass cutting.

About 2 acres of open land is present, some of it eroding. By arrangements with TVA's Scottsboro YACC Camp, this open area was planted to loblolly pines and clumps of lespedeza bicolor.

#### IV. WILDLIFE

A. Endangered and/or Threatened Species

The last estimate of the gray bat population before acquisition about 1976, was 210,000. In June, Dr. Merlin Tuttle again visited the cave in company with refuge personnel and estimated that the colony had increased to 285,000. Hibernating Indiana bat numbers are estimated at 200. In addition, there is also summer use by big eared bats, a species said to be in trouble. The stream in the cave is used by both common cave salamanders and the much rarer Tennessee cave salamanders plus other interesting cave life. Refuge employees moved numbers of large boulders into this stream to provide shelters for the salamanders. Although there have been no positive records the tract is almost certainly used at times by bald eagles and peregrine falcons. The endangered green pitcher plant may occur there, and a search for this is planned in the spring.

B. Migratory Birds

1. Waterfowl

None occur.

2. Marsh and Water Birds

None occur.

3. Shorebirds, Gulls, Terns and Allied Species

The only member of this group occurring are woodcock.

4. Raptors

Although no study has been made of the areas birdlife, red tailed hawks, kestrels, Cooper's and sharp shinned hawks are almost certainly found there.

5. Other Migratory Birds

Mourning doves occur occasionally.



Although there are several miles of cave corridors, this photo is typical of its interior.

C. Mammals, Non-Migratory Birds and Others

1. Game Mammals

White tailed deer are fairly common on the tract as are gray squirrels and cottontail rabbits.

2. Other Mammals

Raccoons, opossums, striped skunks, red and gray foxes, groundhogs, ground and flying squirrels and several species of wild rats, mice, voles and shrews occur.



3. Resident Birds

There are numbers of both resident and migratory non-game birds, but a complete listing is yet to be made.

4. Other Animals

Cave fish and cave crawfish are recorded from the cave itself. Timber rattlesnakes are said to occur on the tract, but an inventory of reptiles and amphibians has not been made.

V. INTERPRETATION AND RECREATION

A. Information and Recreation

1. On Refuge

Large informational signs were erected at both cave entrances. Boundaries of the tract were posted in 1978. A large entrance sign was ordered, but had not been received by the end of the year.

2. Off Refuge

At the invitation of the Scottsboro radio stations, Carolyn Garrett and Atkeson visited this station and gave a program on the cave, its geology, cave life and the need for protection. Several items concerning the cave and surrounding tract were included in the weekly newspaper column written here.

B. Recreation

During late spring and summer, some parties from local towns did gather at the lower cave entrance during late afternoons to watch the bat exodus. There have been a number of request from groups and individuals for entry into the cave, but all were denied. The wooded tract is attractive and could have some recreation potential, but, with no Service personnel on hand, recreational encouragement will almost certainly encourage trespass intrusions into the cave itself and resulting bat disturbance.

C. Enforcement

Prior to acquisition, the cave had evidently been a favorite rendezvous for drinking parties, pot parties, etc. There has been continuous damage and vandalism to barricades since these were erected. The majority of this seems to occur at night and particularly on weekend and holiday nights. Wheeler has sent several night patrols there, but without results. Blowing Wind is 150 miles round trip from Wheeler headquarters, and it is difficult for Wheeler personnel to give the

tract the protection it requires. During the year, Wheeler employees made from 1 to 4 trips monthly to the site. In an effort to bolster enforcement, the Wheeler manager contacted the Jackson County sheriff, the supervisor of State Conservation Officers for this district and personnel of the Stae Game and Fish Division Sauty Creek State Waterfowl Refuge and requested their assistance in stopping cave trespass as well as any hunting on the tract itself.

#### VI. OTHER ITEMS

There were no field investigations nor cooperative programs, although officials of the Alabama Wildflower Society have been asked to make a concerted search for green pitcher plants and have agreed to do so in the spring. The tract remains badly littered with old lumber, metal, machinery, etc. left there by the former owner. However, we have been instructed not to remove any of this until so notified by the Realty Division.