arms of our anxious waiting friends.

Our day will never make the history books of epics on the 'Nordwand' nor was our climb a new direct 'line' or a brave winter solo, but to each of us, the Eiger had given a taste of its wrath. Perhaps it was fear, perhaps an odd enforced respect that had turned us back and got us down.

Victory was certainly not ours, but life still is—and for that at least we should be thankful.

A mile in the sky

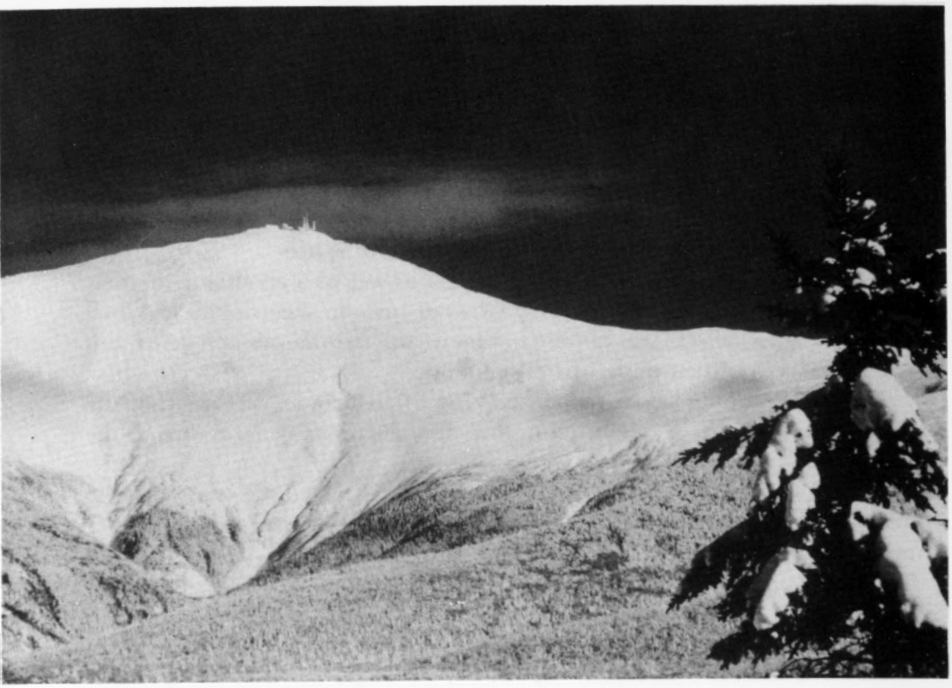
Ray Turmelle

New Hampshire is a small state located in the E part of the United States whose head rests in the mountains and whose feet dangle in the Atlantic Ocean. Although its nickname is 'The Granite State' it is more commonly known as 'The Four Season State'. Four distinct seasons—spring, summer, autumn and winter, each with its own particular characteristics and each appealing to the avid hiker, mountaineer and outdoor enthusiast.

New Hampshire is the home of the White Mountains, a part of the National Forest, and nestled in its bosom is Mount Washington, the highest point in the NE. Although its 1917m elevation is considered only a minor peak when compared to the higher mountains of the world, it is not a peak to trifle with. In fact, if the majesty and grandeur of a mountain were measured by the number of accidents and loss of life attributed to its unpredictable weather and arctic conditions, Mount Washington would rank among the top of the list. Treeline on the mountain is at the 1225m elevation where winds, cold and blinding snowstorms may be encountered unexpectedly any month of the year. The summit lies in the path of the principal storm tracks and air mass routes of eastern N America which made history in April 1934 when the highest wind was recorded on the summit—231 miles per hour.

Mount Washington is laced with well worn trails and usually does not present any problems. The constant threat of being caught above treeline in a surprise storm is ever present as many have already experienced. A few years ago, a well-known American climber of K-2 fame tried and failed to reach its summit because of the severe wintry conditions encountered on that day.

Washington's reputation for tragic deaths cannot be overlooked by the adventurers who tread its trails and climb its peaks. Over 75 deaths have been recorded on the mountain and its surrounding area attributed to weather, exposure, falls and medical reasons. Most of them were due to failing to take the mountain seriously.



15 Mount Washington from the W (This and next 3 photos: R. Turmelle)

Frederick Strickland of Bridlington, England, the eldest son of Sir George Strickland, a member of the British Parliament, was the first person to die while climbing Mount Washington. In October 1849, the determined but foolhardy 29 year old Strickland, against the advice of a friend and a guide, decided to continue the climb alone despite a heavy and early snowfall. When he failed to return, a search party set out hoping to find the overdue hiker. About a mile up the trail, tracks were found in the snow and from their meanderings it was apparent that he had been totally lost and continually went around in circles. Eventually, the searchers found Strickland's bloodstained trousers and underpants. It was assumed that he had fallen into a pool of water, his clothes had frozen to his body which caused severe lacerations when he ripped them off.

The search was called off due to darkness and resumed the following morning. About 10 am, Strickland's body was found about a mile from his clothing, his face wedged between 2 rocks, his legs, face and hands badly torn and bruised. The search party also found footprints on the summit of Washington and since there had been no further snow falls it was determined that Strickland had made the top only to die within a short distance of help.

The Mount Washington massif was an ancient sea, uplifted over 300 million years ago in the Devonian Period. It was completely covered over by great ice sheets 300-600m thick. Huge cirques or bowls such as Tuckerman and Huntington Ravines were carved out by glaciers that preceded the Ice Age, leaving the area a mecca to rock and ice climbers.

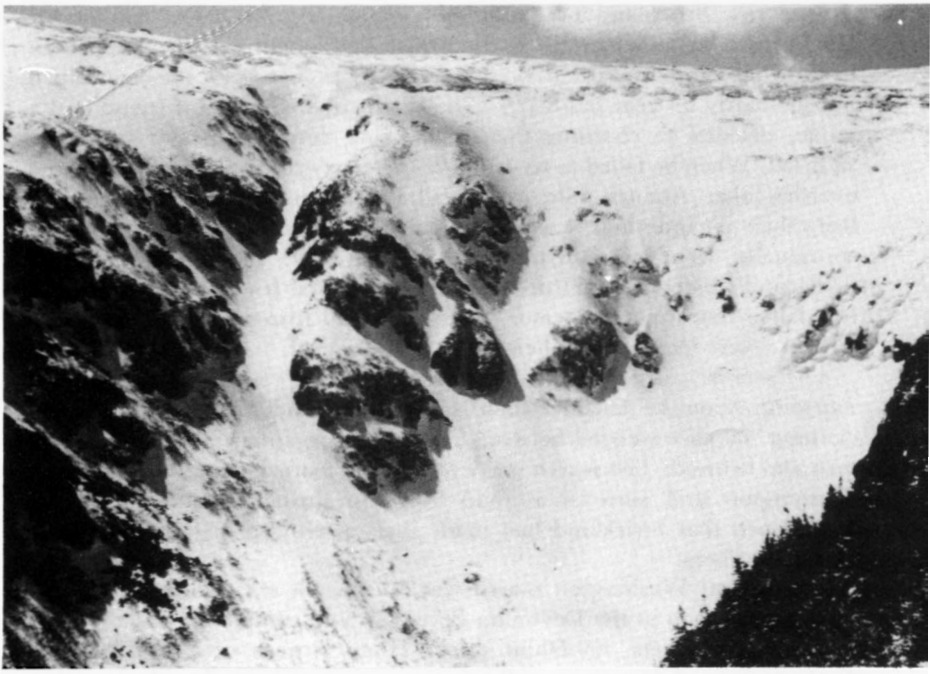
The first ascent of Washington occurred only 22 years after the Pilgrims landed in America by a European named Darby Field. Even though roads and marked trails were non-existent in those early days, Field along with 2 Indian companions left Exeter, New Hampshire in June 1642 and started on their trek from a little over 100 miles away, which took them 18 days to complete. With today's highways and groomed trails, the trip can be done in a few hours. A SE approach, presently the Boot Spur Ridge, was made, the Indians going no closer than 8 miles from the summit as the mountain was considered sacred and the home of spirits.

Field was credited with 2 ascents that year as well as a vivid imagination. He claimed to have found Muscovy Glass or mica in sheets of 40 feet long by 7 or 8 feet wide. He was hoping to find wealth in minerals and gems, but to his disappointment none was ever found.

Mount Washington was named in 1784 after George Washington, the first President of the United States and also a famous general during the Revolutionary War.

The unique geology and flora of Washington attracted the scientific type of individual more than it did the mountaineer. Where several of the higher peaks were named after Presidents of the United States, geologists and botanists were honored with the ridges, ravines and other prominent features.

Many plants and flowers found only in Labrador, Newfoundland, Greenland and other northern regions were brought down by the ice sheet during the last Ice Age and deposited in the Washington area. At the



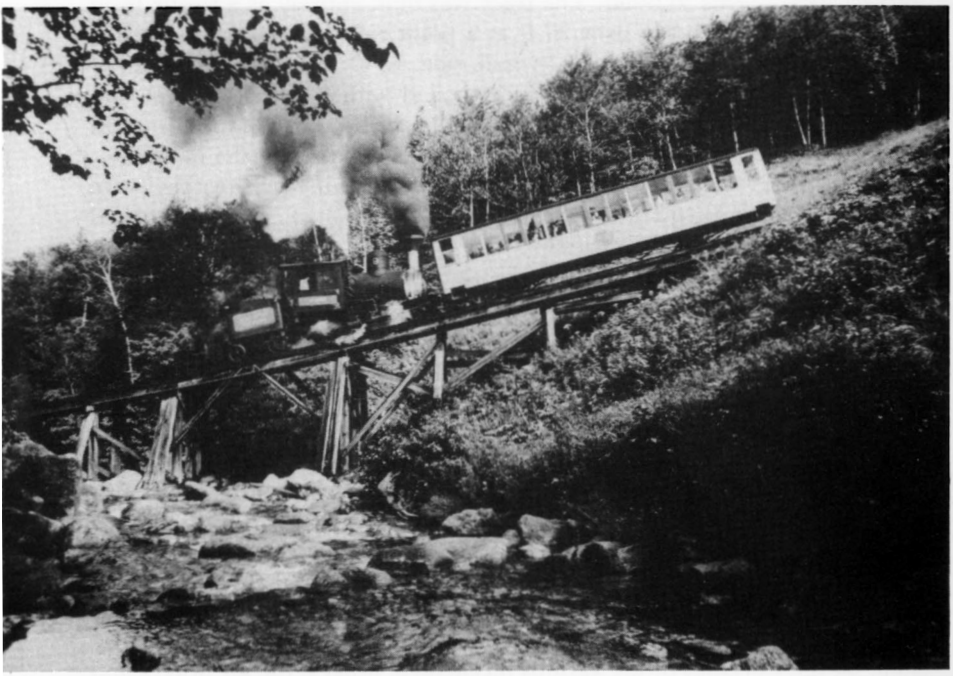
16 The headwall of Tuckerman Ravine on the SE side of the mountain

1500m level, a broad shelf known as the Alpine Garden is the home of alpine shrub (diapensia lapponica), alpine azalea (loise-leuria procumbens), lapland rosebay (rhododendron lapponicum), the rare dwarf cinquefoil (potentilla robbinsiana) and over 60 other species native to the Arctic regions. Most of the plants are perennials and in constant struggle to survive not only from the cold and harsh weather, but from the continuous horde of flower pickers.

The first trail to Mount Washington was cut in 1819 by Ethan Allen Crawford and his father Abel. The Crawfords were the pioneers in this vast wilderness and Ethan became a prominent guide and mountaineer. With the interest in their newly cut trail and the influx of visitors, the family soon took in guests and became the first innkeepers in the area. The trail, called the Crawford Path, attracts thousands of hikers, even to this day, and is the oldest continuously used trail in America.

Interest in the mountain grew rapidly. Several structures from tents to stone huts were built on the summit during the early days, but all proved inadequate when coping with the weather and winds. The first hotel called the 'Summit House' was built in 1852. The project taxed the energies of its builders as all the lumber and material had to be carried up the mountain by horses or on someone's back. It was not long before another building, the 'Tip Top House' was built in 1853 and guests were treated to real mountain hospitality. Managing hotels on the mountain was not easy, as everything from food to various supplies was transported by horses.

As the mountain's popularity grew so did enterprising minds. New



17 The cog railway

Hampshire issued a charter granting permission to build a carriage road to the summit. The challenging project started in 1855 and the 8 mile road was completed in 1861 at a cost of 8,000 dollars per mile. The first vehicle to reach the top was an 8-horse Concord Coach. These unique horse drawn vehicles were built in Concord, New Hampshire and used extensively in the far west as stagecoaches..

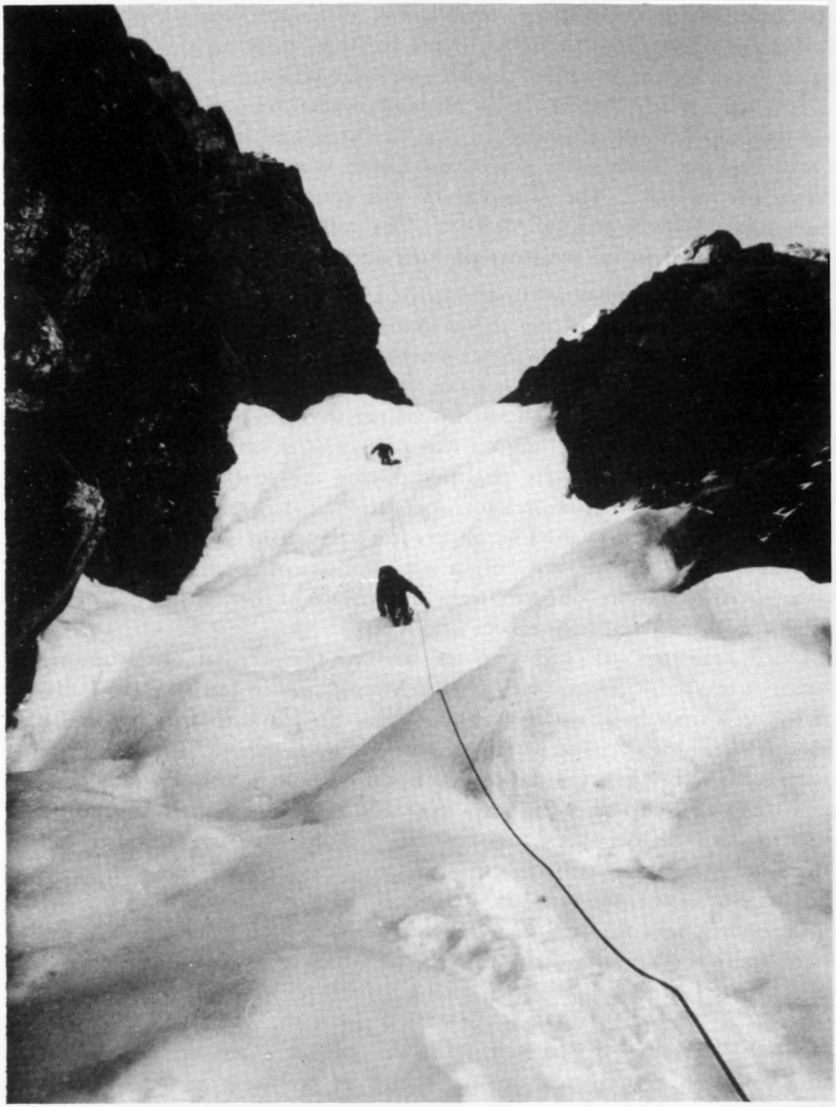
With the introduction of automobiles, the carriage road soon accommodated the auto and in 1899 the first to reach the summit was a Stanley Steamer. The road, however, is closed during the winter months for a very good reason. In 1978 during the middle of May, the crew attempting to clear the road, struggled through 20 ft of snow at the four mile post (elev. 3,840 ft) and over 30 ft at the six mile mark (elev. 5,400 ft).

Today, the road is the scene of foot races, bicycle races, auto races and the opportunity for thousands of visitors to meander over the circuitous journey encountering spectacular views and panoramas that only nature can provide.

One of the earliest mountain climbers of Mount Washington is the cog railway. In 1852, Sylvester Marsh, a prominent Chicago meat packer and New Hampshire native, became lost in a storm while hiking the mountain and decided there had to be a safer way for people to enjoy the beauty of the area. Along with Herrick Aiken, a Franklin, New Hampshire inventor, the first mountain climbing railway in the world was built. Work started in May 1866 with much opposition and ridicule from leading railroad officials. Crews could only work during the short summer months and the project took 3 years to build. The track was built entirely as a trestle from 3 ft above the ground to over 20 ft at a point called Jacob's Ladder, the highest and windiest spot of the $3\frac{1}{2}$ mile ride. In October 1868, the end of track was about 500 ft from the summit and within sight of completion when a severe storm developed so suddenly the workers simply dropped their tools where they were working and rapidly evacuated the mountain. The tools were buried in the snow and the following spring they were picked up exactly where they were left and work resumed. It was completed in July 1869 at a cost of $150,000.

The first engine used to build the railroad had an upright boiler. It resembled so much a condiment cruet that it was nicknamed 'Peppersass'. Several innovations have occurred to the engines since its inception. Today's locomotives are coal fired, the boilers are horizontal and tilted 18 in lower at the front end thereby allowing them to remain level when climbing the steep incline.

Thousands of visitors per year ride this exciting cog railway, a tribute to the men who pioneered this venture and its exceptional good safety record over the years. All its 6 locomotives and cars are equipped with an extensive and multi back-up system for stopping the train in case of a malfunction. It was on one of the early days of the railroad when an apprehensive woman passenger was concerned with the train's safety features. The conductor was doing his best to explain, one by one, step by step, all the workings of the various mechanical brakes, the air brakes and where a ratchet dropped into a toothed wheel during the entire ascent. With



18 Ice climbing in Huntington Ravine

each explanation the woman would ask 'And if that breaks, where do we go?'

After explaining the last brake, the persistent woman again asked 'And if that breaks, where do we go?'

'Madam,' replied the frustrated conductor 'That depends entirely upon how you have lived in this world.'

The extensive research conducted by geologists and botanists in the early discovery days of the Washington area left no stone unturned or plant unclassified. The only area left to be explored, which continues to this day,

was the weather. Getting started was difficult. Several people were interested in studying the most severe weather in the world, but efforts to raise funds for the intended projects were unavailing.

It wasn't until 1870-71 that a 6 member scientific group spent the first winter atop Mount Washington, the 'arctic island in a temperate zone'. Only 2 of the hardy crew stayed the entire winter while the others came down occasionally. The observatory was continuously manned from 13 November 1870 to the fall of 1887. The following 5 years, observations were done only in the summer months and ended completely in 1892.

After the first year of occupation, the United States Army Signal Corps supplied the volunteers for the weather observatory. During the years 1878-80, Sergeant Winfield Scott Jewell volunteered for duty as part of a training period for his coming arctic venture with the Greeley expedition. Unfortunately, Jewell was the first to starve to death in this ill-fated group. One of the trails on Washington was named after him as a memorial.

Winter observations were resumed during the years 1932-33 as Mount Washington's contribution to meteorological research during the International Polar Year. The observatory has been occupied year round ever since and gathers, not only a vast amount of weather data, but also valuable information concerning the endurance of the human body during prolonged periods of severe cold and wind.

On 5 February, 1871 during the first winter occupation, a minimum temperature of 59° below zero F was endured and in January 1877 a wind of 186 miles per hour was recorded. Observers claim that living on top of Mount Washington was just one storm after another. Hurricane winds occurred 2 out of every 3 days. One hundred mile per hour winds happen at least twice a month and blows over 150 miles per hour a minimum of once a month. Presently, the constant winds are providing valuable information in the use of windmills as an alternative energy source.

This year, 1981, the summit has undergone a complete renovation. Most of the older buildings were torn down along with their history and charm to make room for a modern panoramic type building. A new observatory was incorporated in the plans much to the delight and comfort of the weather crew.

Mount Washington has everything that higher and more famous peaks offer, only on a smaller scale. Rock and ice climbing in the well-known Tuckerman and Huntington Ravines are easily accessible and provide the novice and the more experienced climber with classic routes of various difficulties. The well groomed trails are the responsibility of the Forest Service and the Appalachian Mountain Club who also operate 9 huts throughout the mountain area. The huts are approximately a day's hike apart and provide home cooked meals, lodging and an abundance of mountain hospitality. Snow blowing off the high peaks and ridges being deposited in Tuckerman's Ravine to a depth of 75 ft or more often provides skiers with adequate snow cover into the month of June.

Regardless of the outdoor activity one enjoys, Mount Washington stands proud and stalwart among the other peaks and can be easily regarded as 'every inch a mountain'.