

THE ANCIENT BLUE RIDGE MOUNTAINS

A geographer tells how geologists can identify rocks, how the rocks indicate the age of mountains, how scenery discloses earth sculpture through the eons.

I AM always happy when occasion brings me back to the community of my birth, and particularly so when that occasion gives me opportunity to help awaken in those who dwell there an appreciation of its beauty and its excellence.

Those who labored so valiantly through the years for the establishment of the Shenandoah National Park builded better than they knew, for now we have come to the time when there shall blossom forth the greatest park and parkway system in the world, sweeping majestically through three states from the southern limits of the Great Smoky Mountains to the Front Royal latitude of the Blue Ridge. The terrible times that have followed the economic debacle of 1929 have brought much woe and misery into millions of homes and tens of millions of lives. But also it has justified the old saying that it is an ill wind that blows nobody good, for without a combination of drought and disaster this whole magnificent dream might never have come to fulfillment.

It is fitting in the last degree that the Blue Ridge Mountains should be the scene of this tremendous undertaking, for they constitute the oldest mountain chain in the world. Beside them, the Himalayas are in their swaddling clothes, the Andes are in their precocious days, the Rockies have not reached middle age, and the Alleghanies have barely turned their faces toward the sunset of life.

Some years ago a friend in Winchester brought me the piece of shell-marked shale I hold in my hand. He asked me what I thought it was. In turn I asked him where it had come from; he replied that it had come from the rocky bluff of Cedar Creek.

I thereupon told him that while I did not

profess to be either a geologist or a son of a geologist, it was my opinion that it was a bit of the sea floor of the old Devonian sea which stretched from the vicinity of the Gulf of St. Lawrence down through Virginia, across the territory that is now the Gulf of Mexico, and into the Pacific Ocean in the region of the Gulf of Fonseca, between Honduras and Nicaragua. I told him that this was only a guess, and that I would like to take it down to the Smithsonian Institution. There I brought it to the attention of Dr. J. W. Gidley, that veteran paleontologist whose researches brought to us such a great enrichment of the world's knowledge concerning the thousands of species of vertebrate creatures who lived and moved and had their being in the area that we call America before a single species of animal that lives today had appeared upon the surface of the earth.

I asked Dr. Gidley if he could tell me what it was. He asked me where I had gotten it, and I told him. He then replied that he thought it was a bit of the old middle Devonian sea floor of the Shenandoah Valley.

"That," he added, "is only my guess, for you know my specialty is vertebrate paleontology. Let's go across the hall and see Dr. Ray Bassler. He is our specialist in invertebrate paleontology." So we went over to see Dr. Bassler and I asked him the same question that I had asked Dr. Gidley. But he did not ask me where I had gotten it or where it had come from.

"Yes," he said, "I can tell you not only what it is, but I can tell you within a hundred miles north and south and less than that east and west where it came from."

"That is a pretty large order," I thought to myself.

"It came from some point between Hagerstown, Maryland, on the north and Harrisonburg, Virginia, on the south, between the eastern base of the Blue Ridge Mountains and the western base of the Alleghanies," he said.

"You couldn't have done better in placing it," I told him, for it was exactly in the heart of that section that it was collected. Dr. Bassler then explained how he had told, recalling that the shell marks thereon were of middle Devonian time and that some were of the northern fauna and others of the southern fauna which overlapped between Harrisonburg and Hagerstown, and that the old Devonian sea covered the area between the eastern base of the Blue Ridge Mountains and the western base of the Alleghanies.

Old as are the Blue Ridge Mountains, even they had not lifted their heads above the water when the creatures that inhabited the shells which left their mark upon this shale lived their lives. In the Andes Mountains I have gathered sea shells 14,000 feet above sea level. Even in the Alleghanies I have found them 4,000 feet above sea level. My traveling experience and my reading have taught me to respect the verdict of the geologist that the top of every mountain has been at the bottom of the sea and that the bottom of every sea was once the top of some mountain. But the Blue Ridge Mountains have held their own above the sea longer than any other chain in the whole wide world.

The Shenandoah Valley has undergone tremendous vicissitudes in the hundreds of millions of years since the Blue Ridge rose out of the Devonian sea. Millions of years ago it was a high limestone plateau tilting to the east and furnishing the headwaters of such streams as the Rappahannock, the Rapidan, and the Rivanna, just as today the Potomac and the James get their headwaters west of the Blue Ridge. The famous gaps of the Blue Ridge, such as Swift Run, Thornton's, and Rockfish, are the fossil canyons through which these streams crossed the Blue Ridge, but the comparatively soft limestone of the valley eroded more rapidly than did the sandstone of the rocks of the Blue Ridge, with the result that after

awhile the grade was changed and the waters were forced to find a new way to the sea down the western base of the Blue Ridge. Thus it was that the Shenandoah River was born. For millions of years it has eroded its trench down to the Potomac, though it was born but yesterday as compared to the stately mountains which lie to the east of it.

When the Shenandoah National Park is opened and the park-to-park highway to the Great Smokies is completed, millions of people will travel down the great divide between the valley on the one side and the Piedmont and Tidewater on the other, but how few among them will ever know the significance of the scenery it has taken hundreds of millions of years to carve.

How I wish that there could arise some geologist who could write the fascinating story of the Blue Ridge in terms the people could understand. To the initiated the story that scenery can tell of the millions of years of earth sculpture behind it is even more fascinating and intriguing than the beauty it reveals.

I have crossed the Blue Ridge Mountains in thirty-five places by rail and motor and can testify to the beauty of every one of these crossings, and yet none of them can offer the rare beauty that one may behold from the summits of the mountains themselves.

The execution of this great park-to-park program of boulevard building is contemplated by me with mingled emotions. I cannot avoid feeling on the one hand that it is a glorious undertaking and on the other hand that the same amount of money expended in the extension of the magnificent three-track highway of the Valley Pike to the Great Smokies would serve a far greater number of people many more days in the year and would have tended toward bringing back prosperity to those communities whose vision and whose financial support made this great work possible.

If I could have planned the great development we are now about to see, it would have been to extend the Shenandoah National Park to the Jefferson Highway and to extend the Valley Pike as a three-track road to the Great Smokies and then to make small parks at each of the great crossings of the Blue Ridge. Such a program would have served every need of the mountain lover and would have been of tremendous economic importance to the whole area from the Potomac to the French Broad.

WILLIAM J. SHOWALTER

CHARACTER EDUCATION AND THE NEW SCHOOL

Our changing civilization demands a flexible system of morals; this demand is met by making the objective in moral training "doing the best possible thing" in each situation.

ONE school of thought sees moral training as building a set of habits such as paying one's bills promptly, being at school before the bell rings, listening while others talk, counting ten—when angry—before speaking. But no collection of habits prepares an individual for life. Making a routine of certain basic matters, particularly in the field of hygiene, does save time and nervous energy. But situations in real life vary so much that it is impossible to prepare for them ahead of time. Hence the individual who lacks a goodly store of general ideas of conduct and much practice in applying them to particular conditions is apt to be helpless in the face of the unexpected. And even if such training did function, the number of habits needed would be legion and the time required for building them prohibitive.

A second school of thought believes that

In this paper the writer has made considerable use of *Character Education*, the Tenth Yearbook of the Department of Superintendence of the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

character is achieved by developing a composite of traits, virtues, and ideals. They make long lists of such items as accuracy, ambition, consideration, dependability, honesty, kindness, obedience, thoroughness. Just as the former group wastes time by making learning too specific, this one errs in trying to teach general ideas apart from experience. They teach definitions of abstract virtues; they make much use of ready-made maxims. But memorized rules do not guarantee learning. One can make infinite definitions of virtues, yet calmly pursue his way down an inconsistent road of conduct. We use the word *hypocrite* a bit too glibly in such cases. It is possible for the individual to be entirely honest; his moral ideas are merely so heavily insulated with words that they cannot make contact with his actions. How else can we explain the American business man who grows rich at the expense of everyone he works with and then uses his money for philanthropic purposes?

Even if we could absorb ready-made general ideas, such moral training would not be practical. For these virtues do not exist as separate entities; life is not so simple as that. Rarely are we asked to choose between the truth and a barefaced lie. More often the problem is like that confronting Scott's heroine in the *Heart of Midlothian*: not quite sure that Effie had murdered her illegitimate child, should the sister Jeanie testify for her or, rather than risk a possible lie, send her to the gallows? Furthermore, a virtue carried to an extreme tends to become a vice. Here is a busy mother, trained from childhood to an extreme thoroughness, who cannot save time from her housekeeping to live with her family. And here a lad beautifully obedient to his parents, but also obedient to the neighborhood bully. Truly, as the prophet says, there is a time for everything, even thoroughness and obedience.

A third school of thought sees character

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