

Nature Photography

Every photograph that is made, whether by one who considers himself a professional or by the tourist who points his instamatic and pushes a button, is a response to the exterior world, to something perceived outside himself by the person who operates the camera. And whatever is perceived and is translated into a photograph is perceived visually. Without the visual experience there can be no photograph. Auditory and tactile sensations, singly or in combination, are not sufficient to be expressed photographically. This is not to say that other ^{sensations} perceptions than the visual cannot have an influence on the resulting photograph, and that they may not have a very significant influence. They may determine the interpretation of the visual ^{experience} perception of an exterior object, situation, or phenomenon but they must have something to work on that is connected with seeing. A scene may have musical or tactile connotations to a sensitive ^{person} photographer; he may say there is music in these trees, these hills, this shore, as Thoreau exclaimed about nature, "What is the music I hear?" He may say he can physically feel a place; that its mood is depressing and repellent or elevating and joyous, but there is always the scene itself without which these sensations would not be aroused. Some photographers say they are inspired by inner revelations and insights that have no exterior reality, but these influences too work through the eyes on how the exterior world is appreciated.

No doubt there are those who will confuse matters by raising the question of the meaning of reality. I propose to circumvent this philosophical ^{confusion} red herring by announcing the premise, for what I have to say, that a world independent of the illusions and

hallucinations of the human mind does have concrete existence, and that general agreement on its physical attributes is found in the numerous categories of its contents - in physical, chemical, biological, geological, and astronomical classifications. To the esoteric rejoinder that all knowledge is part of a grand illusion of universal mind, I say such a hypothesis is untestable and is therefore meaningless, like the question, "What existed before the beginning?" One must live and work on the premise of objective reality which is the bedrock of the accepted world.

It matters not what theme, what emotional commitments, or even what financial considerations motivate the photographer, he responds to the same kind of stimulus - to what he sees. He may find his inspiration in the social scene, in the lives of people, their joys and sorrows, their accomplishments and tribulations, their ~~exaltations~~ ^{exaltations} and sufferings, and in the way they meet the vicissitudes of life. Or he may be concerned with the natural scene in all its complexity, variability and flow of dynamic interactions. And thirdly his interests might be purely episodic - portraiture to reveal individual character and personality, or studies of nature to demonstrate factual relationships and structure. The boundaries between these categories is infinitely fluid with much overlapping of departments.

Which point of view is predominant in any one person is determined very largely by the influences in his early life that preconditioned his outlook. The urban child will most likely be concerned more with the human condition than with abstract pristine nature, which to him is probably chaotic, incomprehensible, and frightening. Nature lacks the simple order of human society

where even the most blatant injustice is more acceptable, because it can be judged in terms of moral precepts, than are the harsh realities of interspecific relationships. If he has been brought up in an intellectual atmosphere his removal from the natural world is more artificial, but simultaneously, by virtue of greater rationality, more accommodatable to it. Joseph Wood Krutch illustrates the adaptability of the city intellectual and scholar who took up rural life to become a defender of untrammelled nature.

¶ The less educated and sophisticated regard nature with suspicion and fear, as a brooding force to be subdued and tamed, or more uncompromisingly to be conquered. To conquer means to harness, to domesticate, to convert the forces of nature to useful purposes, by which is meant to the enrichment of people. Resources unused are considered wasted, not by the unsophisticated alone but especially among educated individuals whose economic interests are closely tied to the exploitive industries, the best examples of which are mining and lumbering. To them forests in protected areas are locked out of the main stream of human endeavor and become, therefore, worthless. Worthless to the logger but not to those who get inspiration from virgin forests. ^{Pulopa} The point is: whose use in the long run results in the greatest benefit.

Scientists, by and large, are more detached and open-minded in their attitude towards the natural world than are the utilitarians. The motivation of those whose interests are in the physical and biological realms is wonder and the search for knowledge and explanations. They seek no material advantage. The person whose formative years were spent in the country is more prone to develop an attitude akin to that of the scientist. Without effort, almost unconsciously, he accumulates a large store of factual information

on which his wonder and curiosity operate to raise questions of cause and origins. Should he in the course of time become a photographer his work will reflect insights obtained from these influences of his youth. His preoccupation will be with the natural scene, because there his sense of wonder was aroused. The urban person, conditioned by his close contact with individuals from many walks of life is more likely to be motivated in his creative activities by empathy - identification with their tribulations - than he is by wonder at the complexities of nature. Of course exceptions will always be found to this perhaps too rigid grouping of people by their urban and rural backgrounds as to their subsequent motivations.

My early years placed me in the natural world group, not entirely because I was brought up in the country, but equally because of strong paternal influence in the sciences. As a child I was introduced to many of the then current concepts in the fields of geology and astronomy, and to the affinities within the living world encompassed by the biological disciplines. My father was an ~~uncompromising~~ Darwinian. His belief in evolution was fierce and comprehensive, including not just the planet earth with all its geological and biological ^{phenomena} ~~features~~ but the solar system and the entire universe as well. When he was a young man many of the theories on the geological history of the earth and the origin of life were vigorously disputed by vitalists and theologians, and contrary to all their arguments he insisted on a purposeless world, a world ruled by chance. It is not surprising, therefore, that such a materialistic outlook had a profound influence on my thinking and that I became a materialist too, although possibly ultimately a less dogmatic one. It is very difficult to live entirely by abstract principles; conflicts and contradictions constantly

arise and one is forced to compromise convictions or to compartmentalize the manner in which one faces irreconcilable points of view. My father was a very moral man but the apparent contradictions between his belief in a purposeless universe and his moral convictions never seemed to disturb him.

Thus my devotion to the natural world was the inevitable consequence of childhood environment and family influence, and when I became interested in photography the subjects that occupied my attention were those primarily connected with the natural scene. At the same time my perception of beauty became intimately associated with nature. This feeling has persisted throughout my life, although with maturity my appreciation for what is beautiful has vastly expanded. And so the aspects of nature that I perceive as beautiful in the conventional sense as well as in a phenomenal sense are what I attempt to record photographically. A feeling for beauty as a determinant in photography is, I believe, a more important consideration to photographers of nature than to photographers of the human scene. A famous photographer whose work I have always admired was once quoted to me as having announced, in I suspect a reckless, not-to-be-quoted moment, that color is vulgar, nature is trivial, and beauty is unimportant. This man's work deals exclusively with the human scene. Most of his photographs are beautiful to my eyes, but then we all know the old aphorism about beauty. Perhaps it's also a matter of definition.

Nature is not to ^{be} thoughtlessly disparaged, for it holds a venerable place in the arts. Nature was the inspiration of prehistoric man as evidenced by the cave paintings of Lascaux and the pictographs ^{of} primitive men in Africa, America, and Australia.

The pre-Columbian temples of Middle America are decorated with sculptures of snakes, eagles, and jaguars. Egyptian temple columns of the Middle and Late Kingdom periods were ~~were~~ designed after the lotus flower, and the orders of Greek temple architecture were partly ~~stylized~~ ^{stylized} natural forms; the echinus of the Doric capital derived from the sea urchin; and the modillion of the Corinthian capital decorated with acanthus leaves. And landscape painting has a long and venerable history.

But an account of the influence and inspiration that go into the creation of a work of art is not necessary for its justification, which rests on its inherent ^{accepted} merit.

After photography became for me a full time occupation in place of a hobby, certain concepts began to take root in my thinking which I was eventually able to recognize as general criteria for acceptance by others. They are two: photographs must be convincing and they must be appealing. The conviction carried by a photograph is related to the choice by which its content was abstracted from the total scene that remains implicit beyond the explicit image. The appeal of a photograph resides to a great degree in its subject matter, but here organization is especially important too, as it is for the fulfillment of the first criterion.

Very early in my life I became interested in birds and spent much time during summer vacations photographing the larger conspicuous varieties such as gulls, herons and hawks. But during the years when I was obtaining an education for a career in science I gradually lost interest in photography, which revived in my postgraduate years. ⁴ Probably because I never felt completely comfortable or competent in research I began to spend more time in photography in general and of birds in particular. With the invention of flash bulbs I saw in them a potential for making

close-up photographs of small birds of a quality comparable to what could be done with other nature subjects. Most bird photographs that were being published at this time were quite inferior to the best general photography. The reason for this was that to stop motion, fast shutter speeds were necessary, and high speeds required large apertures which in turn reduced depth of field. To obtain photographs of birds that would equal the standards of quality obtainable in other fields, small lens apertures as well as high shutter speeds are essential. With flash lamps close to the subject this was possible because the illumination became many times brighter than available light. Most bird photographers appeared to be satisfied with an image of a bird, and ^{often} an inferior one at that, without regard for the whole picture, which frequently contained grossly out of focus elements. They didn't seem to appreciate the importance of the aesthetics of the picture as a whole. By judicious placing of the light sources in relation to the camera, quite natural effects can be obtained. My first pictures, and those of Sam Grimes of Jacksonville, Florida who used the same technique, were a revelation to ornithologists, who, however, felt that placing so much equipment close to a bird's nest put its welfare at an unacceptable risk. This seldom improved to be the case. By taking common sense precautions mishaps can be avoided and desertion prevented. Ornithologists did not realize how adaptable most birds are.

When I tried to interest a publisher in my bird photographs, which in the beginning were all black and white, I was told that they should be in color for identification ^{purpose} of the birds. This criticism is what got me into color photography. I began to see other subjects because of their color, and when my wife said they

reminded her of Thoreau and suggested that I illustrate Thoreau I gave up black and white photography almost entirely.

And so I was led into color photography largely by chance circumstances that modified ~~an~~ ^{my} inclination for the natural world. The evolution of my preoccupation with nature, rooted in boyhood country life and influenced by my father's scientific interests in the milieu of close family ties, was inevitable.

A photograph is an abstraction from space and time. Its content is both explicit and implicit, explicit and definitive within the framework of its limiting boundaries and implicit in its suggestion of wider relationships than those depicted - a scene outside evocable through the imagination of the viewer. The area recorded by the camera, optically consistent and logical, is a compression into a small space of a vastly greater reality, a ^{miniaturization} ~~miniaturation~~ of the world we know, which has the effect of enhancing the abstraction and creating a feeling in the viewer, and even in the photographer who made it, of the unreality of the subject. The situation in which photographs of small objects are blown up larger than life is the same, they acquire also the quality of the unbelievable. A house fly magnified to the size of a bird becomes a monster from a world we can never experience. The sense of remoteness from reality is even greater in pictures made by electron microscopes of the internal structures of cells. Because the special optics of the machine sharply defines everything within the field of the instrument, these pictures of things infinitely small, like astronomical photographs of things infinitely far away, are mysterious, fictional, and beyond experience. But the photograph in itself remains real enough.

A photograph more than a painting, is an abstraction in time. It celebrates the past. Whether of a particular combination of

of atmospheric conditions or of the behavior of a living being, man or creature, a photograph is a record of an instant in time, unique and unrepeatable, because the flow of time is apparently unidirectional. A painting on the other hand is a synthesis of many moments perceived in succession by the artist. The photograph freezes the instant, and in the case ^{of} with moving subjects such as the flight of birds, often in surprising positions not recognized at the time by the photographer himself.

As the photographer of the social scene records human emotions and behavior, normal and abnormal, man's relationship to his fellow men and to the environment, and the impact of his activities on his surroundings, how he alters them to his advantage and disadvantage, and how he copes with the situations he creates, so the photographer of the non-human world ~~is~~ the world that exists independently of people - is concerned with the interrelationships between other living things and between them and the physical environment. The study of these relationships is ecology. Ecology in its broadest sense includes man too, but in the dichotomy between man and nature man is considered in a separate category which could be called human ecology. Thus in its most comprehensive meaning ecology is the study of life.

With the development of my interest in photography in the realm of nature, and as I became increasingly concerned with the colors of the world through bird photography, I began to appreciate the complexity of the relationships that drew my attention, which I saw were more clearly illustrated in color than in tones of gray. When photographers reject the significance of color, they are denying one of their most precious biological attributes - color vision - which they share with relatively few other animal species. The exploitation of color vision, one would suppose, would be of

paramount importance. It was this complexity in nature that I found most irresistible and which, at first, in a very fumbling way, I tried to capture meaningfully on film. I focused on details, and when on occasion I made pictures of the same subject in both color and black and white it was ^{usually} always the color photograph that carried the message because it contained the information that attracted my attention in the first place. ⁴The color of natural objects, as I learned from a publisher in the case of bird(s) plumage, is an important feature of them, as important as shape and arrangement, and in fact influences one's evaluation of composition. This is especially true for detail pictures. In landscapes the bolder forms are less dependent for emotional effect on color, which may partly explain my preference, except under exceptional circumstances, for close up subjects. One exceptional situation I found in Antarctica where the wide view seemed to express better my feelings of desolation and loneliness on that vast empty continent. There photographs made from the air of mountain ranges buried in ice, peak after peak and range behind range projecting through the polar plateau, needed the pale sky to create a sense of insignificance and isolation in a hostile environment.

In the Colorado River canyons the big view conveys less information about the qualities of the young canyon, its origin and life, and expresses less adequately for me the evidence for the powerful forces that combined in its creation, than does closer focusing on cliffs and seeps and alcoves. What I saw on the many trips I made through Glen Canyon and on which I focused my camera evoked visions of centuries of rain near the end of the last continental glaciation, of thundering torrents brown with silt and sand that carried all before them down side canyons.

In those wetter days the river and its tributaries cut rapidly into the Mesozoic sandstone carving narrow, winding slots hundreds of feet deep before the slower processes of erosion could widen the walls at the top. The effects of this wild dramatic period were clear for anyone to see and they were the evidences I tried to record because they were the record of the history of the canyon which the comprehensive view did not reveal so clearly.

My concern for the protection and preservation of wild lands grew out of my interest in and photography of nature, beginning with birds, and because of the way I felt about birds the first conservation organization I joined was the National Audubon Society. In those days, more than a generation ago, the Audubon Society's concern was almost exclusively the protection of birds against human predation, and so I thought of conservation in those terms - to prevent the economic exploitation of birds by market hunters and plumage collectors, and from sportsmen. After killing a sapsucker with an air rifle at the age of ten, I could never again see the sportsmanship in shooting birds. The idea that conservation could have a much broader meaning to include wild land, rivers, seashores, and wilderness was just beginning to take root and I gave these purposes little thought. My indignation was directed against the self-serving apologists who gave lip service to the protection of migratory birds but defended the shooting of ducks, quail, and shorebirds because they enjoyed doing it and rationalized the harmlessness of the practice for themselves. Even some members of the Audubon Society were sportsmen. When the population of a species, which is the target of the hunters' guns, declines, it is amazing how universally the cause is attributed to factors other than the activities of the hunter. And even sometimes conservationists

are blamed.

Not until World War II ended did the finiteness of the resources of the planet begin to be recognized. During the first few postwar years a number of books appeared warning of disaster ahead. Among these were ROAD TO SURVIVAL and OUR PLUNDERED PLANET. Other works celebrating nature and wildness but intending no political action were published, the more famous being A SAND COUNTY ALMANAC, THE TWELVE SEASONS, THE IMMENSE JOURNEY, and THE WEB OF LIFE. The authors of these books were informing their readers by indirection that the world beyond the activities of men was a rich and beautiful place with a worth not measurable solely by its utility.

As the photography of the natural scene, more detailed in content than the classical pictures of spectacular scenery made by Sullivan and Jackson, became popular, appreciation for nature was stimulated. Pictures became almost as influential as words, and, when sensitively ^{accomplished} expressed, a feeling for nature could be elicited as effectively as by a thousand words. Then with the development of color processes the effectiveness of photography became still greater. The publication of the Sierra Club exhibit format series of books - often called coffee table books - beginning with THIS IS THE AMERICAN EARTH and continuing for more than twenty volumes, most of them in color, had a tremendous influence on the public's attitude towards nature and ^{the public's} ~~an~~ appreciation for its non-material values. As photographers adapted their seeing to the potentials of color film, ^{dramatically} the subjects that attracted their attention changed ~~drastically~~. The closer horizons suddenly became more interesting because of subtle color content which in conventional black and white was lost. The great diversity of color in subjects such as

tree bark, lichens, and geological formations could now be captured by the camera and was a great surprise and eye-opener to viewers of these photographs. These are the subjects that have continued with increasing frequency to draw my attention and to captivate me ever since I started to photograph in color and to read the journals of Henry David Thoreau. Thoreau was acutely aware of the color in nature.

More than one hundred years ago he expressed his despair over the insensibilities of his fellow men when he said: "Most men, it seems to me, do not care for nature, and would sell their share in all her beauty, as long as they may live, for a stated sum or a glass of beer. Thank God men cannot as yet fly, and lay waste the sky as well as the earth."

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