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(Portfolio)

A NOTES ON BIRD PHOTOGRAPHY

Ever since the invention of the hand camera, and perhaps even before, photographers and ornithologists have dreamed about photographing birds. To obtain a clear image in black and white of these elusive and active creatures must have seemed in the beginning to present insuperable difficulties. At that time no one even dreamed of recording them in color. There was, however, an early and persistent desire to make photographs, because to photographs more than to paintings or to any other form of illustration was attached the concept of verisimilitude and of reality. Because paintings are imaginative creations, those of birds are regarded with a certain amount of skepticism [no matter how exact they may be] for they ^{seem} are inevitably subject to human error. Photographs, on the other hand, ^{have always been considered closer to} were considered real, to tell the truth, to give a ^{more likely} literal record of what was in front of the lens. [The camera-never-lies point of view was generally accepted.] Illusory as this belief [is] now ^{seems} recognized as being, there is much truth in the idea that a photograph ^{can} does give something that a painting cannot [do]. Although it can be manipulated to give a great variety of emphasis - [that] ^{what} some critics call, ^{a variety of} distortion of truth - [yet] it does [irretrievably and inevitably] ^{it does} record a moment in the history of the subject, and this ^{it does} happens, or [it is within the nature of the process that it] can be made to ^{do} happen, with great precision, and in great detail. It is these [qualities and these] potentialities apart from its creative aspects that have ^{given} lent to photography ^{its} the appeal [that it carries] as a medium for illustration and for recording the histories of living things.

In the early days the idea that photography could be used for these ^{such} purposes ^{seemed} was quite visionary. ^{Birds, for example, were considered} Birds were known for their ^{about} habits of hopping around in dark bushes, perching in the tree-tops ^{underbrush}

for too elusive

and flying through the air. How could they be photographed with the slow plates and slow lenses available fifty years ago? ^{It was impossible to see how they could be photographed.} The ^{fact} answer is simply that they could not be - at least, not well. Never-the-less ^{to do so} the attempt went on, in spite of the severe limitations of the equipment. Images of birds were obtained, recognizable as birds if not ^{what} as to kind. Bird photographers accepted the limitations of their cameras and films ^{believing them} and became complacent about their results. Their feathered subjects could only be photographed when they were quiet and composed and perched in the bright sunlight. Photographing birds in flight or in the deep woods was an impossible task. With the introduction of reflex cameras, particularly the Graflex, in this country, which was regarded as the ultimate in equipment, the situation was somewhat bettered, because at about the same time there had been an improvement ^{helped somewhat, and so did the increase} in emulsion speed, ^{the development of} panchromatic film ^{was} had been invented and improved optical design permitted the construction of faster lenses; but naturalists still depended on inducing their subjects to pose in the sun. They/now, it is true, could photograph some of the larger, slower moving birds, while soaring and in flight, ^{but} although there was no improvement in other respects. Even if they had had available the fast film of today they would have been little better off since the increase in emulsion speed ^{has} been in the neighborhood of twenty fold whereas the ratio of brightness of objects in noon sun and the deep woods is often more than onehundred.]

[So we see that bird photography today, had it not been for radical departures from the old concepts, in spite of all the new fangled cameras on the market, would still be in the stage of twenty years ago.] The principal ⁿ radical innovation [came about from] the adaptation to bird photography of [the invention of] a powerful

source of artificial light, ~~which made possible photography under any conditions of sun or shade.~~ In fact it made the photographer quite independent of natural light except when photographing large birds. ^{brought about} [The invention ~~that brought about~~ this change was] the foil-filled flash lamp [that press photographers use so commonly and for whom it was probably originally intended]. The burst of light from this device is [very] intense. [Indeed,] when [it is] combined with a reflecting surface and placed ^{near} [not far from] the subject, an illumination many times brighter than ~~xxx~~ from the sun can be obtained. [Thus,] ^{for} the first time it became possible to control light and, by [properly] synchronizing the shutter with the light flash, to photograph birds at relatively high speeds [independently of natural conditions]. Pictures could now be made in [the] deep woods or on cloudy days, and by skillful manipulation of lamps and reflectors a smoother, less spotty, more pleasing and revealing illumination could be arranged. [While] most important of all, exposures could be made at much smaller apertures, ^{making possible} [producing] pictures of far greater clarity and depth of field than [had] ever before [been possible].

Still, the limitations imposed by mechanical shutters on the photography of flying birds remained. [Open-and-shut shutter speeds of 1/200th of a second were considered good and faster ones remarkable, and not only was the difficulty of synchronization with flash lamps considerable but there was also a necessary sacrifice of much of the available light with these speeds. Nor was much improvement in the situation to be expected in any case by this approach since even 1/500th of a second is slow in terms of the flight of birds.] A novel approach to [a solution of the difficulties of photographing moving objects was taken by] ^{this difficulty} ^{was to} side-stepping the mechanical problem entirely. Dr. Edgerton developed a [very] short-

first name?

duration, high-energy flash which could be made to occur almost instantaneously when the leaves of any between-lens shutter are open. ~~The~~ The flash time itself becomes, in a sense, the shutter, determining the exposure time. The principal ^{le} of this ingenious device is, briefly, to discharge [the] energy stored in an accumulator at high voltage through a gas-filled electronic tube. As the discharge occurs the energy/^{appears} in the tube largely in the form of light. By proper choice of the voltage and accumulator capacity it is possible to obtain the energy output and flash duration desired for a particular photographic ^{task} problem. Since there is an insignificant triggering lag, a flash time of 1/5000th of a second can be synchronized with relative ease to occur ^{whenever} [invariably when] a shutter is open at its greatest ~~operating~~ speed. ^{furthermore,} [Also] by using a large bank of condensers the total light output can be made equal to or greater than the output from conventional flash lamps. [The advantages of this equipment over all previous schemes should readily be appreciated but unfortunately they have been attained at considerable sacrifice of portability.] Photographs may now be made anywhere and under almost all climatic conditions except heavy rain at high speeds and small lens apertures.

^{Along} with these technical advances there has been an [inevitable concomitant] increase in our knowledge of the birds themselves, and particularly ^{with} [in] reference to their [adaptability and] tolerance of equipment near their nests. Although there are some striking examples of [correlation between species and shyness, it is not as general as it] ^{sky species, there are not as many as} is commonly ^{supposed} [believed to be]. Rather, the [usual] differences between birds in this respect seems to be an individual one. ^{thus} [So] one robin builds its nest above a doorway [where it is in frequent close association with people] and shows little fear of ^{human beings nearby,} them, ~~while~~ whereas another in the forest is extremely wary and difficult to approach.

A difference is also found very often to exist between the individuals of ⁱⁿ a pair, where either sex may be so ~~shy~~ fearful that it leaves all care of the young, during photographic operations, to its [much tamer] mate. Many [birds] photographers spend a ^{much} good deal of time building [and decorating] blinds or hides in which [they feel it is essential] to conceal themselves [on all occasions] while ^{these} [photographing] birds. Indeed, ^{these} [they] are essential for photographing many kinds of birds, especially birds of prey and many [of the] colonial breeding species, but for most [of the] small birds they are simply a waste of energy and a nuisance. It is very inconvenient to operate a camera with flash lamps from a blind, especially when the blind encompasses the camera, and when it does not it might just as well be eliminated and the equipment operated from a slight distance by remote control. Of course, [owing to the individuality of birds] there are always exceptions. However, at a distance of fifty to seventy five feet most nesting birds pay very little attention to a quiet observer. They will be [disturbed slightly] after each exposure when he goes to his camera to change the film, but generally ^{they} very quickly accept the situation and often return to their nests before the photographer has [even] had time to get back to his ^{station} control switch.

^{Photographers are often} Many times I have been asked whether all this apparatus does not cause the birds to desert their nests [or, if they accept it at first, whether the first flash does not frighten them so badly that they ^{you} abandon their young. I suppose all bird photographers have [occasionally] had the misfortune of seeing their activities bring disaster upon birds, and I am no exception, but by being always considerate of their welfare one can usually avoid doing them harm. At the first ^{sign} [indication] of desertion ^{of} or injury to the young the equipment should be moved to ^{such} a distance ^{as will be acceptable to} [at which it is accepted

by the birds. ^{may then be} From there it ^{is} moved up gradually as they become used to it. In the great majority of cases, ~~however,~~ the apparatus is quickly accepted by birds with young in their nests, ~~whilst~~ ^{and} whereas the flash itself has no noticeable affect on them. In fact, birds will adjust to a great deal more in the way of strange and unusual objects near their nests than ^{most persons realize} they have ever been given credit for. My equipment consists of a 4x5 Graphic View Camera on a very sturdy tripod to which is attached by adjustable arms ^{three flash} three flash lamps, one near the camera and the other two arranged for side lighting, ^{usually set up?} but all about thirty inches from the subject. The rest of the equipment including power pack and batteries is near by. Sometimes I also set up a photoelectric tripping device by which the birds take their own pictures as they fly through a light beam. Beyond a certain point it seems not to matter how much additional equipment is added. Perhaps birds are like ^{those} seals, ^{that} which ^{the} Maine fishermen say can only count to three, beyond which, like ^{to us} our infinity, ^{for them} to them there is no greater quantity.

The majority of birds build their nests within ten feet of the ground and are reasonably accessible for photographing from a standard commercial tripod. There are still a good many, however, that build them considerably higher than this that may be very desirable to photograph. ^{There are two very different} Two opposite solutions to this kind of problem exist: the camera and other equipment can be raised to the level of the nest (telephoto lenses are not practical ^a to use with flash equipment), or the nest can be brought down to a convenient height ^{close to} for photographing from the ground. The first ^{method} solution is applicable to woodpeckers ^{do} and nests in deciduous trees. For this purpose a portable scaffolding or large tripod made out of two-by-fours is often very useful. When this is insufficient ^{it may be necessary} the only procedure

remaining is] to build a platform in the tree or to erect a tower. The second solution is especially useful for nests built in coniferous trees which do not wilt. Here the procedure is to cut off the branch [on which] ^{supporting} the nest [is placed], after carefully securing it with ropes and balancing it so that it will not upset, and then to lower it by ^{easy stages} [small increments], giving the parent birds a chance to become accustomed to each new location, until it has been brought down to the desired height. Removing the nest [by itself] ~~from the tower~~ and placing it on ^{a tower} another branch [lower down] seems to me [a] much less ^{satisfactory} [desirable solution] since it changes the site chosen by the birds.

With complete success and without harm to the birds [in any case] I have lowered several nests that would ^{otherwise} have been virtually impossible to photograph [in any other way]. One of the first ^{that I} [to be] moved ^{→ it} [which] involved climbing [up and down] the tree many times and a good [deal of trepidation] to boot was the nest of western tanagers [built] in dense foliage, thirty-five ^{many anxious moments} to forty ^{above the ground and} feet [high], near the end of a long branch of a ponderosa pine overhanging a ravine. The branch curved upwards at its outer end [where all the heavy foliage was growing.] ^{and} Unless it ^{had been} could be counterbalanced [in some way] it would certainly ^{have turned} ~~turn~~ upside down as soon as it was cut off. To prevent ^{wooden} this [misfortune] a strong yoke [of wood and angle iron] was bolted to the top of the branch. To this ^a the rope was attached, ~~xxx~~ passed over a crotch higher up in the tree and tied near the ground. Then the branch was sawed off - chopping would have been too rough - and the whole contraption ^{was} lowered about six feet. When the tanagers returned they first flew to the [empty] place [in the air] where their nest had been, They were [quite] bewildered at finding ^{nothing there,} [no branch or anything else,] although [just below them,] ^{below} only a few feet [away] in plain sight was their nest full of hungry [and eager] young. They flew

[up] to the top of the tree to look the situation over, while I [nervously waited] and wondered how they could be so blind and hoped that I would not have to raise that heavy branch back again. On the third try at the empty place ~~xxxxx~~ ^{male} of the tanager~~s~~ alighted on the "new" branch, which had mysteriously appeared conveniently below the place where their nest had previously been, and there, not apparently to his surprise at all, he found his ~~xx~~ ^{offspring} Children whom he immediately ^{then} fed and flew off without informing his mate. She continued to fly around ^{the} looking for ~~her~~ nest until he returned with more food. This time he had less trouble finding the young birds and she followed him to them. From then on, much to my relief, all went quite smoothly ^{and we managed to lower} until the nest ^{of} was lowered and swung around to within ^{of} about two feet from the ground on the uphill side of the ravine. ~~Once this stage was reached photographing these birds proved quite easy.~~ When I finished photographing, which proved to be quite easy, I hoisted the branch up again a few feet, ^{so} where the young birds would not be ^a such ready prey to predatory animals. ^{repeatedly} Every day or so thereafter I visited the tanager family and I am happy to say that the brood was successfully fledged.

The last nest [that] I brought down from ^a the tree top [- it literally was in a tree top -] was [one] built by a pair of Ruby-crowned kinglets. [These are birds that I had always hoped to be able to photograph, but their nests are ^{The nests of these birds are difficult} not at all easy] to find because they are usually cunningly concealed high ^{ly} [up] in the densest foliage of spruce trees. [Just once before I had found a Ruby-crowned kinglet's nest.] Only by spending many hours watching a male kinglet, [who eventually led my eyes to it,] ^{I able to find} was this one found. During the nesting period the male bird sings exuberantly and indefatigably, and it is because of ^{this} his loud song that he can be [seen and] followed at all,

but he is so small that he can quite unknowingly elude the most diligent watcher. This ^{nest} one unknowingly revealed to me the hiding place he soon learned of his nest, but ~~it soon became known to him~~ ^{he soon learned} that I had ^{concealed} ~~discovered~~ ^{about} his secret. It was ~~placed~~ ^{not more than} six feet from the top ^{and next to the trunk} of a fifty ^{foot} feet tall Colorado blue spruce, ^{hardly a practical} not a very substantial place ~~even~~ to climb to, ^{to say the} least. Fortunately, about ten feet ^{away} from this tree grew a considerably taller spruce, from the top of which it was possible to lasso the top of the nest tree and to fasten a rope above and across. The top of the nest tree was then cut off several feet below the nest and gently allowed to swing over into the space between the two trees. The kinglets behaved ^{had} in much the same way as the tanagers but became accustomed more quickly to ^{follows} the new positions of their nest as it was gradually lowered to the ground. Here again I had little difficulty in getting photographs.

These two examples illustrate how it is possible to solve one kind of problem that frequently confronts ^{may be solved} the bird photographer. Many others will arise from time to time, each will differ from all others in some respects and each will call for a special adaptation of a previous solution or will require ^{each requiring} new stratagems and ^{more resources} greater inventiveness. ^{But as far as I am concerned, all this} In the end, all the time and energy that I expend in these directions are not given for the purpose of collecting photographs of birds. Instead, it is done with an uncompromising determination ^{but} to raise the sights and standards of bird photography to a point where it shall be able to take its place beside the best ^{of any kind} of all photography. ^{complete} Unless the total final picture is ^{visualized} envisaged and the photographic process exploited to its maximum potential topping this image to reality, this purpose will never be accomplished, except accidentally.

Flash photographs have ^{often} been ^{criticized} subjected to much criticism on account of their night-like appearance. They are objected to quite often because of ^{a nightlike} their black backgrounds and unreal quality. The latter ^{characteristic} may well be a ^{true} real fault and, when it is ^{apparent}, may have resulted from a poorly conceived or carelessly executed lighting plan. A black background can, indeed, be ^{too} striking, but it should be ^{pointed out} considered that a light background full of amorphous, blurred ^{and distracting} objects ^{can be even} is perhaps more confusing ^{and} than black. If ^{everything} all were in focus, ^{moreover} on the other hand, the ^{effect} situation might be even ^{more disturbing. It would seem} worse. I judge that the objection to the black background, ^{by and large} stems from a conservative dislike of a new ^{and different} way of doing ^{something} things. ^{Actually, the dark background is} Often it does give an appearance very much like the true state of affairs. Peer into a thicket on ^{an overcast} a dull day and what do you see? The leaves and branches nearest to you are brightly lighted, ^{while} those ^{farther} (in) are ^{and are surrounded by} dimmer with dark shadows ^{around them} very much like a flash photograph. On the other hand, on a sunny day, ^{those in} the bush is full of flecks and dabs of light. ^a Against this ^{background} it is very difficult to obtain unambiguous photographs, ^{unless a} but with ^{used to swamp out} flash the spotted effect of the sunlight ^{is} completely swamped out.

Photography is a creative art. Photography of birds differs from photography as a whole only in the specialized character of the subject. Its potentialities are no less ^{and} or no more than the whole. ^{of photography} The statement of a photograph - its ultimate meaning and truth - is not ^{concerned with nor} derived from the subject matter. It comes from the ^{essence and} spirit of its author ^{which it mirrors} mirrored in it and it speaks truth to the degree that he has left a clear and honest imprint on his work.

To me

For me the reason for spending so much time and energy to photograph birds

That the primary purpose is to obtain photographs of birds is not sufficient reason for me to spend so much time and energy photographing them, but/^{is}also to raise the standards of bird photography to those of the best photography of any kind.

To make the [primary] purpose for spending so much time and energy primarily collecting bird photographs is insufficient reason for me

The primary purpose for me

My purpose in spending so much time and energy photographing birds is [primarily] to raise the standards of bird photography to those of the best photography of any kind, ^{not merely} [and only secondarily] ^{obtain} to/more photographs of birds.

My purpose in spending so much time and energy photographing birds is not merely to obtain more photographs of birds but to raise the standards of bird photography to those of the best ~~of~~ photography of any kind.