



Chellis spotted this barge as it made its way along the Chattahoochee River in Georgia.
All photos by the author

by KEN CHELLIS / AOPA 46627

Plane And Camera

Here's practical advice for the nonprofessional photographer on film, equipment, exposures and techniques for aerial photography.

So, the next time your head's in the clouds, don't just sit there and gaze at the view. Capture it—

■ ■ Those of us who do much cross-country flying in lightplanes probably are the world's most constant rubber-necks. We gawk and stare, for good reason. This beautiful land is most fully appreciated from the vantage point of a lightplane. Some of the views are so strikingly beautiful that most of us have attempted to record them on film. The results that come back from the processing laboratories are often not what we saw from the air. After much experimenting with film, equipment, and different exposures, I think I have finally come up with some hints that may help

record those scenes as they should be.

Choice of camera? Any good 35 mm is a fine aerial camera if used properly. I prefer the behind-the-lens light meter for reasons I will explain shortly. The best lens to use is a standard one. A wide-angle lens is almost certain to include quite a bit of the airplane or even the window in the picture. A telephoto lens is quite difficult to use because it is so sensitive to motion. I have used a 150 telephoto successfully but the aircraft was as nearly stationary in the sky as I care to have it and still stay airborne. Through-the-lens viewing is very

handy since you can frame the picture better and you can see at once if you have the edge of the plane window in the picture.

Shutter speed? Use as fast a speed as your camera and film will permit, because of the vibration and movement of the plane. Don't brace the camera on the airplane; let your body act as a vibration dampener. Ideally you should slow the airplane down, have flaps down, open a window, and then shoot. Do not stick the camera out in the prop blast, and do not try to shoot forward through the prop.

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On many airplanes you will not be able to open a window to shoot. In this case, move the camera as close to the window as possible without touching it. Any scratches on the window will be out of focus when close to the lens. Reflections may show up, though; so look closely at the surface of the window. If you can see the reflection of your camera, it probably will show on the picture. A strategically placed hat or glove will usually blank out the unwanted glare. (Another good reason for pilots to wear those visored hats.) A note of caution when shooting through the window: Some sections that are curved have quite a bit of distortion in them.

Focus is simple—set it at infinity and leave it there.

Filters? Let's face it, the haze is getting worse all the time and a good haze filter will cut through quite a bit of the airborne goop. (If you're shooting a pollution picture, however, leave off the haze filter.) I use a polarizing filter as well as a haze filter because I like blue skies and sharp horizons in my photographs.

Try to shoot with the sun at your back. That means circling sometimes. But there are no filters that cut haze from a picture when it is shot into the



Sunset, on top in northern Florida.

This western power plant is a known polluter. Two of its stacks have antipollution devices; two do not.



A mountain range in the western Rockies, photographed in late afternoon. Notice the wing strut in the upper left-hand corner.

sun. A lens sunshade is handy to keep sun from striking the lens when you are shooting slightly down-sun. Another word of caution: Sunshades extended into the slipstream tend to disappear like magic.

The angle of the camera? If this seems like a rather unimportant point, try showing a color slide of a nearly vertical shot, with no apparent horizon, to a nonaviation-oriented group. You'll have a disoriented group of photographic critics. Often a portion of the airplane included in a corner of the picture adds quite a bit. A strut or a wingtip can do the same as a branch of leaves on the ground. They help frame the shot and give it depth.

Aircraft? Well, you're stuck with your airplane. But don't knock it as a cam-

era plane; it's a lot better than you might think. In spite of all the tales, I have found a helicopter makes a poor camera platform because of its inherent vibration. A high-wing plane is my favorite simply because you have an unobstructed view down, but a low-wing plane can be banked easily and there is your wingtip to add the framing and depth.

Another word of caution here. *Don't try photographing while flying alone.* You really cannot see and be seen with your eye in the viewfinder of a camera. Try to get a pilot friend to do the flying while you do the picture-taking.

What about bumps and rough air? They are insidious in their ability to occur just as you snap the shutter. But they rarely are back to back; so if you have just had a good thump—shoot quickly. Most likely you will get the picture before the next bump comes along.

If you are shooting movies, shoot them as fast as the camera will run, unless you have a special reason for needing the standard speed. The extra frames per second will not be noticeable

when shown and will smooth out aircraft and rough air motion.

A high thin overcast does not mean you must stop shooting—the effect of indistinct shadows is often a nice one. But extensive clouds do mess up good photographs. On top is another story—I have rolls of film of interesting shots from above the clouds.

The best time of day is from 10 a.m. to about 2 p.m. This can be stretched on days when the sun rises early and sets late. Don't miss all the beautiful sunrise and sunset shots. Just take along some faster film. Do shoot some of those golden scenes the ground-bound people never see.

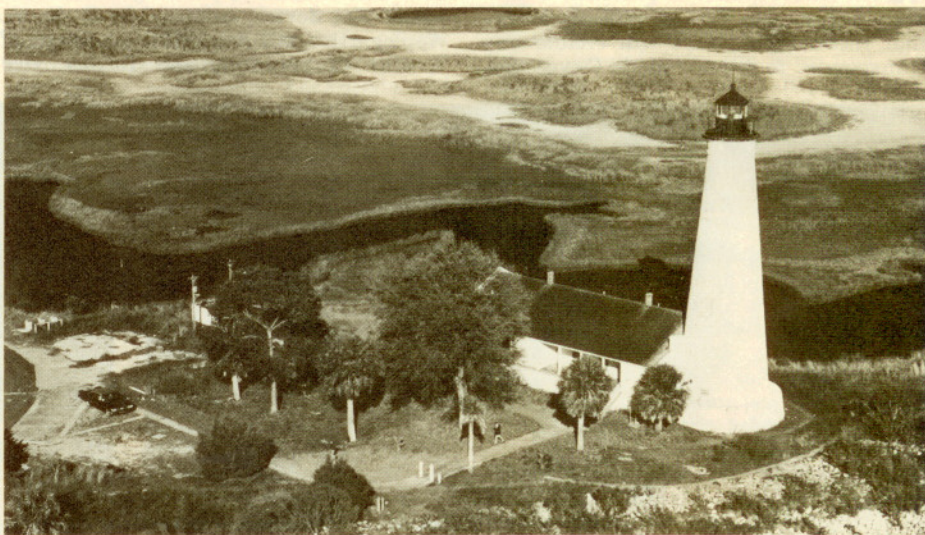
The lens opening? This is the nitty-gritty of aerial photography. One of the reasons I suggested a behind-the-lens light meter is that it tells you just exactly what light is falling on the film. Light meters tend to exaggerate the light the higher you are in altitude. Besides, with behind-the-lens light meters you don't have to allow for filter factors when setting the lens. The light meter that is not behind the lens is going to see the haze. For the hand-held light meter, take a light reading prior to takeoff; then take another reading when airborne. The airborne reading will indicate more light.

Split the difference between the two and you will be close. Don't forget the filter factor.

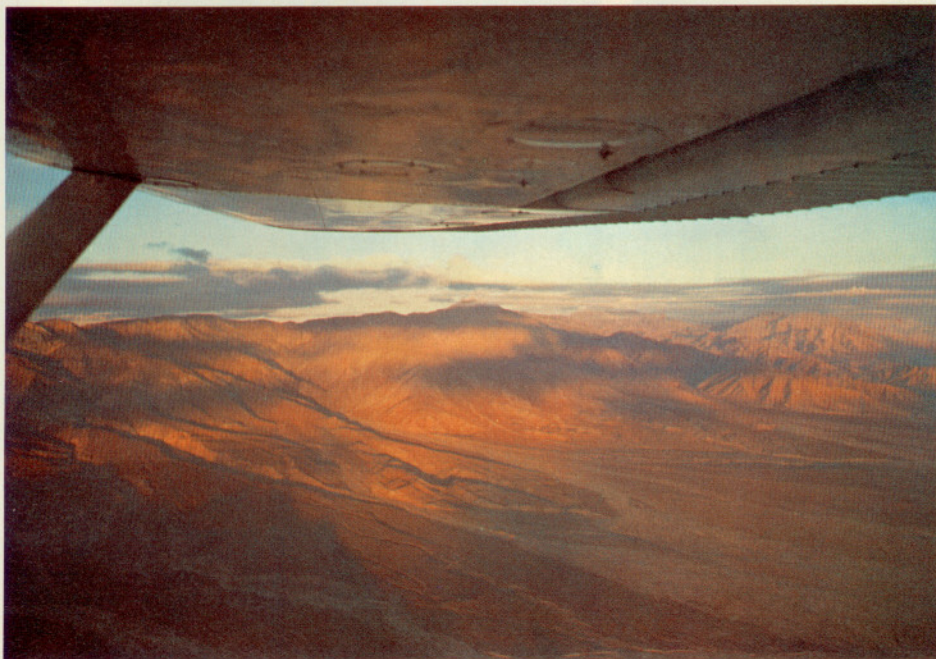
I have used a crude filter-factor light-meter combination that works well for me. Use the airborne light meter reading and forget the filter factor under these conditions. One haze filter will compensate for the light meter error at about 1,000 to 2,000 feet above the ground. If you're flying higher, add a Polaroid filter and you'll find this just about compensates for all the meter errors.

What film? For color pictures, use standard color film. High speed film will quite often demand a faster shutter speed or a smaller lens opening at altitude than the camera will provide. However, the high speed film has its place in early-morning and late-afternoon pictures. When you're shooting black-and-white pictures, you should use extremely fine-grained film—you will most likely want enlargements, and details of aeri-als come out rather fuzzy with grainy film.

Don't hesitate to shoot pollution scenes from the air. You have a unique opportunity to show just how clean or dirty the air can be. And ground-bound folks will not believe their air is that dirty—after all, they can see blue sky,



St. Marks light, a landmark on the Gulf Coast in northwestern Florida.



straight up. The camera that rides along with you can be a most powerful tool in fighting pollution as well as a source of pleasure. □

THE AUTHOR

Ken Chellis has been selling aerial photographs for the past five years, and considers himself a "semi-pro." As a flight instructor at various AOPA clinics, he is often asked about flying and photography. A pilot for 27 years, he received his commercial certificate and instructor's rating at Ohio State University.

Sunrise near Palm Springs, Calif., captured on film during the 1966 AOPA Plantation Party.