BY LORI MACNICHOL, FOUNDER OF MOUNTAIN/CANYON FLYING SEMINARS

The Common Thread

How mountain flying meshes with primary training

You may not think that "learning to fly" and "mountain flying" fit well in the same sentence, but I urge you to reconsider. As the owner and operator of a flight school that teaches both primary and mountain/canyon flight instruction, I've been privileged to teach more than a thousand pilots and participants. In my experience, I've seen that there *is* a common thread that weaves mountain/canyon flight training perfectly into your primary flight lessons.

You might be thinking, "But mountain/canyon flying is an advanced form of flight training. I'm too overloaded with the tasks and requirements of getting my private pilot license to think about flying in the backcountry!" It's true that you have your hands full as a student pilot, but I encourage you to seek just a few hours of instruction with a qualified mountain flight instructor. Although it's not necessary to travel to the high country to learn about density altitude, if you do, you'll be rewarded with unparalleled flying experiences.

You'll never forget the first time you drop below a mountain rim, descend into a canyon, then negotiate a dirt-strip landing along a lazy mountain stream.

A "perfect" landing is the common thread in all flight training. The landing process is a complicated combination of many small decisions. In primary instruction, you focus on the preparation for the landing. As instructors often say, "A good landing is 90% pattern and approach."

I'll never forget my first solo trip into the backcountry. I didn't even have 60 hours of total PIC flight time, but I figured, "No big deal. I live here." I had learned to fly and received my private pilot certificate in McCall, Idaho, at a field elevation of 5,020 feet. I had just purchased a Cessna 182 and planned to go fishing in the backcountry. I was sure I knew everything as I prepared to fly to Chamberlain Basin Airstrip in the Frank Church Wilderness.

The morning of my trip, I flew in a direct line at about 10,000 feet MSL, using dead reckoning (no GPS back then). I remember being so pleased when I spotted the airstrip. I descended to what seemed like a reasonable traffic-pattern altitude, but after circling multiple times, I realized I was in way over my head. I wasn't sure about the landing or the aim point, or what speeds to use. I questioned whether I could stop before the end of the runway, and I wondered if I could apply what my instructors called a "go-around" to this landing. And then I wondered about the departure. Where do I go? The questions in my mind kept coming. I made the best decision considering my experience and flew back home. It didn't take long to find a qualified mountain and canyon flight instructor to give me a few hours of dual.

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The first day of instruction was a revelation of things I knew and thought I knew. It consisted of getting to know my aircraft intimately—in every phase of flight. I used that first common thread of airspeed and attitude to develop a speed and configuration worksheet. This later

became the basis for the mountain checkout used daily at my school.

The work goes something like this: We climb to an altitude that simulates a density altitude we want. We test different configurations and flap settings in slow flight, level flight, descents and turns. We note power settings, rates of descent and speeds. We expand this to include imminent and actual stalls, noting and recording the indicated speeds in these phases of flight. Then we test the stall information while turning, descending and climbing. This gives us enough information to configure the aircraft in a steep, stabilized approach of an approximately 4.5-degree glideslope. This is a surprisingly big descent rate, but it gives excellent energy-management control.

These scribbles and notations of speed and flap settings are similar to the information used by student pilots when they first learn to fly. At my school, we clarify words that seem to apply better to the mountains. For example, we call our downwind entry speed "canyon speed." We replace the go-around point on the runway with a more descriptive idea called "abort point." Is it beginning to sound similar to what you've already learned? The final key to success in the mountains is the ability to control your speed. Aim point on the runway also is an important part of the landing. You must be the master of airspeed control and aim point. We expect control of attitude within two knots of a targeted airspeed. Yes, two knots.

After my introduction to mountain/canyon flight instruction in 1982, I remember thinking, "Why wasn't I taught this during my primary flight training?" It was apparent how important concepts like the steep, stabilized approach were to controlling the outcome of a flight. Picking and holding the aim point opened a new approach to landings. I knew my power setting for every phase of the flight, and I could fly a steep approach to a precise aim point, which also gave me the ability to land closer to my aim point and took away the float down the runway. I had learned what my aircraft could do for me, and more important, I could make it do what I wanted it to do. I took my C-182 back to the Chamberlain airstrip with my new tools and new speeds. I had acquired the skills and confidence to gauge the outcome of the landing and takeoff. This training changed my flying forever.

When we fly with students, we provide them with a method that will allow them to find the appropriate speeds and power settings; fly steep, stabilized approaches; and pick an aim point and land successfully. That's possible in just the first's day's flight lesson. If you can take it further and fly a few more times, then you're in for the next flight-training treat. We stretch the common thread to drainage navigation, canyon turns and emergency canyon turns. As most pilots know, there's a pure joy and pleasure in designing approaches and departures in the challenging environment of new and confined areas.

I encourage you to get some mountain/canyon flight instruction. It will forever change the way you fly and look at an airstrip. Next thing you know, you'll find yourself landing in the backcountry to meet fellow pilots for camping, fishing and flying. You'll be confident and comfortable that you're equipped to meet the challenges of a demanding and advanced flight environment. P&P

Lori MacNichol, ATP, CFII, CFIMEII and SES, is the founder of Mountain/Canyon Flying Seminars. Visit www.mountaincanyonflying.com.