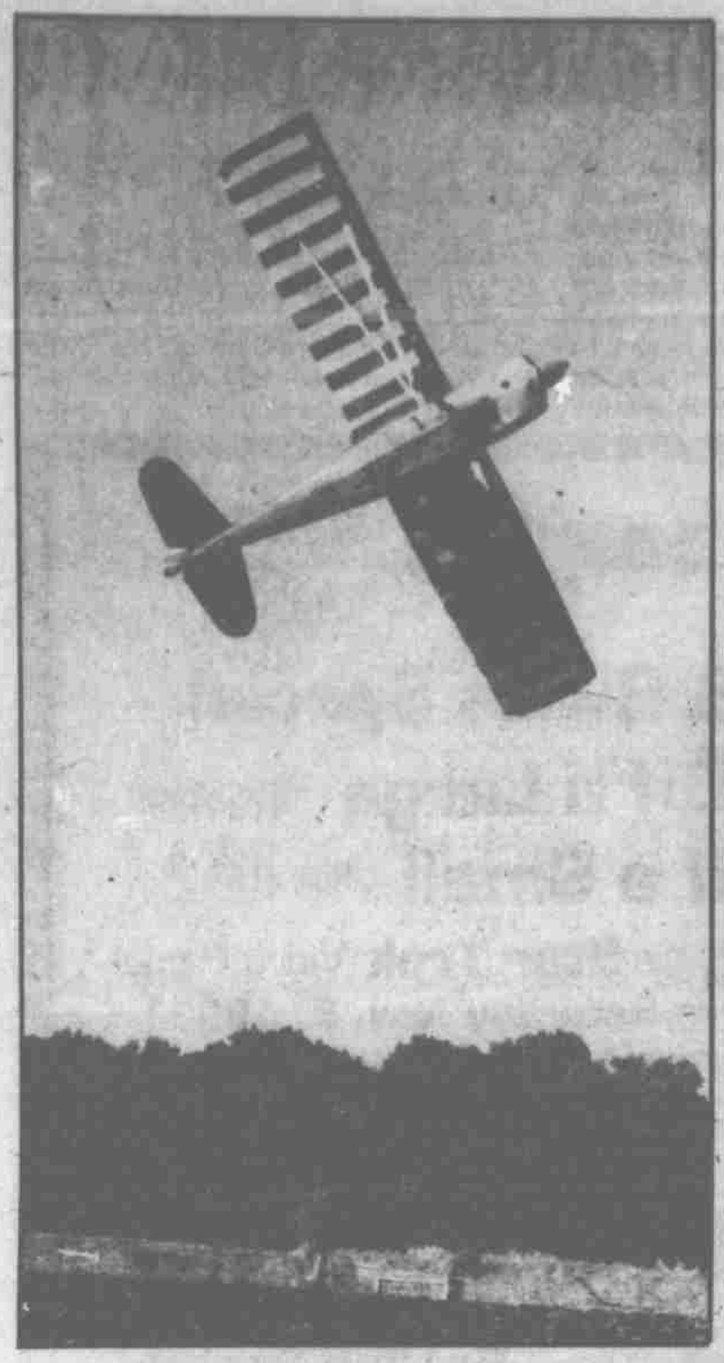
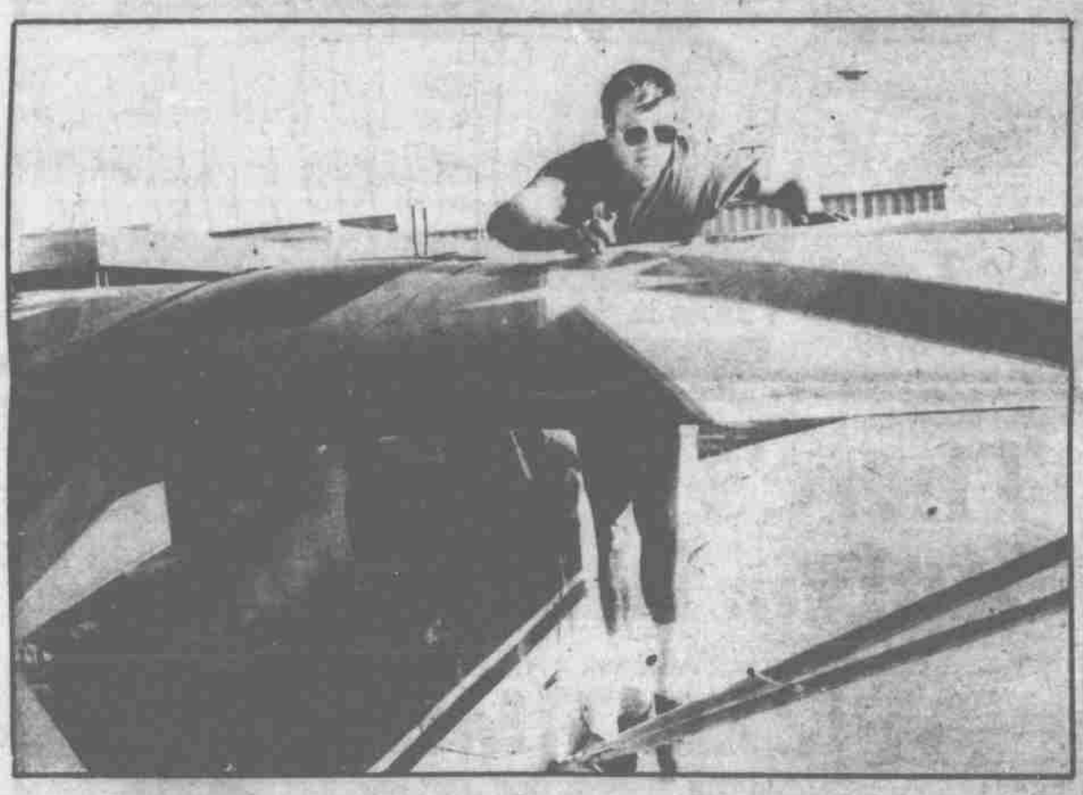


Kaleidoscope



Aerobatic pilots spin, swoop during topsy-turvy flights

"Daring young men in their flying machines . . . " the old tune rings true today when describing aerobatic pilots.

Spinning, looping, rolling — aerobatic planes look like gulls wheeling their way across the sky.

Pilots insist anyone can learn to perform aerobatic maneuvers.

"I've taken people up who have never flown before and had them performing simple rolls and loops," said Marvin Helman, a part-time aerobatic flight instructor. "But that only happens after careful ground instruction first."

Ground instruction is necessary to prepare prospective pilots and passengers for psychological and physical stress during maneuvers, Helman said.

"Your body experiences sensations it has never experienced before," he said. "The sensations are conflicting. When you start to bank, your eyes are telling you that you're tipped. But, because the G-force (gravity) holds you secure in your seat, your body tells you you're rightside-up. This conflict disturbs the subconscious."

Helman said people who "do a lot of roller coasters, and trampolines" have an easier time getting acclimated to some of the sensations. But unlike a roller coaster, the ride is smooth and quiet.

Despite the smoothness, there are physical stressors.

"Pulling anywhere from three to five G's is stressful on the body," said Rod Oliverius, Helman's former student. "After 10 minutes of maneuvers, you're fine. After 20, you're tired. After 40, you can get pretty sick."

Aerobatic pilots do normal maneuvers and inverted maneuvers. Normal maneuvers, performed rightside-up, cause you to be pulled into your seat with a certain force; this phenomena is known as "pulling positive G's." This means that if you weigh 100 pounds and a maneuver causes you to pull two G's, you are pulled into your seat as if you weighed 200 pounds.

Inverted maneuvers, performed upside-down, pull you away from your seat into the restraining straps. That force is known as pulling negative G's.

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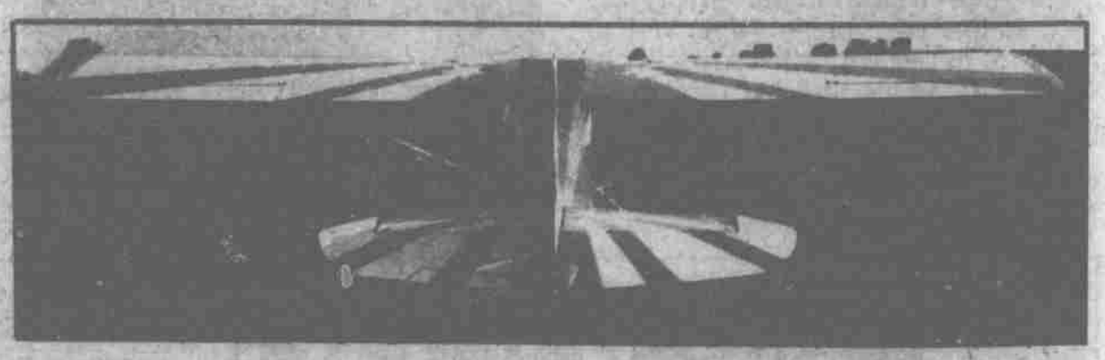

Clockwise from upper left:

Knife-edge maneuver: wings of the plane are perpendicular to the ground.

Helman gives Daily Nebraskan Photo Chief Craig Andresen a ride to remember. Andresen rode with Helman through many manuvers including inverted flight (seen here) and the hammerhead.

The star-spangled Bellanca Decathlon 180 waits on the runway. the cockpit of the Bellanca is none too large for the 6-1 200-pound frame of Oliverius.

Oliverius checks the plane out for "dings and dents" before each flight. Any deviation from the norm, no matter how small, could cause serious trouble in the air.

Story by Mona Z. Koppelman

Photos by Craig Andresen