

ARIZONA DAILY STAR. Tucson, Ariz.: Mar 21, 1995.

PLANE WORK DUO SKIMS GULF SEEKING ELUSIVE PORPOISE

By Douglas Kreutz.

TO SAVE A SEA: Last in a series

PUERTO PENASCO, Sonora - Ten minutes after a blood-red sunrise, Emily ascends into the sky in search of the world's smallest porpoises. Emily is a well-worn, single-engine Cessna 182 airplane named for no one in particular. Her pilot is Tucsonan Sandy Lanham, president, chief aviator and sole employee of a company called Environmental Flying Services. Lanham's passenger is Silvia Manzanilla, a marine ecologist from the National Autonomous University of Mexico.

Their mission this autumn morning is to skim at an altitude of 200 feet over the Gulf of California in search of a rare and extremely endangered porpoise known as the "vaquita."



"Vaquitas are so small - less than 5 feet in length - that we have to fly very low to have any chance of spotting them," says Lanham, who has logged hundreds of hours over the gulf as a pilot for research scientists. "It's an interesting way to fly," she says.

By "interesting," Lanham means tedious, fatiguing and dangerous. Flying at such a low altitude for hours at a time leaves little leeway for error, especially far out over the gulf. Emily has never hit

the water. But Lanham owns the best inflatable life raft money can buy and keeps it aboard the plane at all times. Her task on this four-hour flight, and seven similar flights over a four-day period, is to fly over precisely plotted routes and assist Manzanilla in surveying the seas for vaquitas, whose name means "little cow" in Spanish.

Using a satellite-aided device known as a global positioning system unit, the two will record the exact location of vaquitas and other marine mammals in the gulf, which is also known as the Sea of Cortez. Later, Manzanilla will incorporate the information into a long-term study on the secretive little porpoises, which infrequently are sighted from ships or shore.

The species, which is found only in the upper Gulf of California, has dwindled to an estimated 200 to 500 animals over the past several decades. Scientists aren't certain of the cause of the vaquitas' decline. But Manzanilla and others note that many of them have drowned after becoming entangled in fishing nets put out for other species.

The Upper Gulf of California and Colorado River Delta Biosphere Reserve, established by the Mexican government in 1993, limits fishing in areas where vaquitas have died in nets. But it's too soon to tell if the reserve will help preserve the species.

"I think the nets are still the biggest threat, but I want to know how the reserve is protecting critical habitat for vaquitas and other marine mammals," Manzanilla says. "The information we are gathering now, and in surveys in other seasons of the year, might give us some answers."

Lanham, who took up flying 14 years ago, started her Environmental Flying Services business in 1990. She serves as a pilot, aerial guide and "extra set of eyes" to researchers from environmental groups and institutions such as Conservation International, the Centro Ecologico de Sonora, the Sonoran Institute and the Smithsonian Institution.

"I write grant proposals and basically try to convince various foundations that what we're doing here is useful," she says. "Use of an airplane like mine would cost hundreds of dollars an hour here. But because we get grant money to cover the main expenses, the only cost to researchers is about \$25 per hour for fuel. The federal government in Mexico City has been very cooperative," she adds. "They've given me a blanket permit to operate in Mexico."

Manzanilla, who plans to conduct additional vaquita surveys later this year, describes the arrangement as "a great advantage for our research. We couldn't do this work without the help of Environmental Flying Services."

As Emily drones over the gulf this morning, the weather remains settled and the sea surface is glass-smooth - perfect for marine mammal sightings. But Lanham and Manzanilla catch only a fleeting glimpse of three vaquitas during their four hours in the air. Such results are disappointing when compared with an extraordinary success the two experienced on the first of their vaquita surveys last July.

"We saw 56 vaquitas in one four-hour flight then," Manzanilla recalls.

Adds Lanham: "That was a bonanza. To say we were happy, that doesn't begin to cover it."

By the time the autumn survey is over, Manzanilla and Lanham will have sighted 13 live vaquitas and one dead one in about 30 hours of flying. In a follow-up survey last month, they will spot only two vaquitas in four days of flying. They emphasize that they're not conducting a "quantitative survey" or census, but instead are trying to plot the location of vaquitas in gulf waters at various times of the year.

"I want to detect the seasonal patterns of distribution of different marine mammals, including vaquitas," Manzanilla says, adding that she will correlate that data with information on what is considered suitable breeding habitat for the species.

She also intends to interview people who work on fishing boats in the gulf to hear about their firsthand observations of vaquitas, which apparently feed on sardines and other small fish and fall prey to sharks and killer whales.

An educated prediction about the fate of the little porpoises must await the outcome of research by Manzanilla and other scientists.

For now, Manzanilla says only this: "I think they have a chance."