



PLANE RIDE—The plane is loaded with four animals. Two attendants are stationed between the first and second sets of stalls. The animals did not mind the altitude, which was 14,000 feet.

AERONAUTICS

“Flying Horsecars”

Hundreds of pack mules and horses were carried over the hump in Burma-to-China transport. Animals merely got sleepy at time of oxygen lack.

► THE COW jumped over the moon only in the imagination of the nursery-jingle writer, but mules actually flew over mountains during the recent war. One of the strangest jobs of animal transport ever undertaken, involving carriage by air of 2,682 U. S. Army pack mules and horses, is described in the *Cavalry Journal*, (Sept.-Oct.) by a veterinary officer, Col. Ralph W. Mohri.

The animals had originally been taken into the Burma campaign theater, where jungly, swampy, mountainous terrain had licked all motorized transport, even that mechanical mule, the jeep. Troops served by this old-fashioned but effective hoofed supply train had the Japs well on the road to liquidation, and it was decided to transfer part of them over the Himalayan “hump” into China, where the enemy was still strong.

Air transport of the troops, weapons and supplies was no special problem; that had been going on for a long time. But taking along the indispensable pack animals was something else. Mules and

horses had been air-borne in numbers once before in the theater, by the British, but that had not involved so long a hop, nor had it required flight up to 20,000 feet altitude.

Biggest worry was about the possible behavior of the animals at altitudes where men have to put on oxygen masks. Would they take the oxygen lack quietly, or would they become panicky and begin to kick and rear, threatening the safety of all aboard? The event proved the anxiety needless: the animals merely became sleepy. In general, Col. Mohri reports, both horses and mules took their airplane trips very quietly, and without particular excitement.

Planes used were the ATC's old reliable C-47's. They were converted into flying horsecars by taking out the bucket seats and securely wiring in stall partitions of green bamboo. Floors were specially prepared by laying down first a layer of stout plywood, then a waterproof tarpaulin, then heavy coconut matting, and finally hay. From four to

six animals could be carried, together with their attendants, and five days' rations for both men and animals. It took about 20 minutes to load a plane, and time in the air was about two and one-half hours.

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METEOROLOGY

Radars May Increase Knowledge of Meteorology

► RADAR instruments developed for war purposes may play an important part in future weather forecasting and also make permanent records relative to the nature of storms and their movements for use in the science of meteorology. The entire progress of the recent September hurricane in its gradual curve up Florida was accurately plotted on film by Army radar war equipment. Photographs of each radar scope were taken each 15 seconds by electrically operated cameras.

The use of radar to detect storms began at least as early as August, 1943. Before that, Army radar technicians had noticed “ghost echoes” on their relatively primitive scopes but did not realize at first that they were caused by thunderstorms. Later they did, and Army weather observers soon learned how to use radar to plot other storms and they later developed better techniques of detection. But the size and violence of the September 15 storm, and its closeness to the radar station, resulted in new findings about the nature of hurricanes.

Throughout the hurricane the general shape of the disturbance was plainly seen on the micro-wave set, whose energy was reflected excellently from the rain carried by the storm. The storm was seen to be in the shape of a figure six with clockwise spiralling tails. At one time six distinct tails were observed, three of which were detached and were moving northward ahead of the storm's center. These tails were deduced to be rain-bearing storm clouds, or line squalls eight to ten miles in width and from three to five miles apart.

When the hurricane was abreast of the radar station, and only 10 miles away, the radar revealed that the eye of the storm, the low pressure area in its center, was 12 miles in diameter, and the lack of echoes proved that there was no precipitation within it. The height-finding radar set revealed that the dense cloud deck surrounding the eye extended up to an average height of 18,000 feet.

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