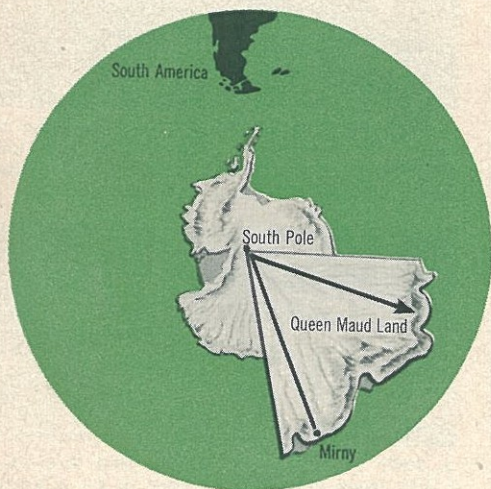


# Big Russian Snow Cats to Prowl Antarctic Wastes

**Soviet scientists plan 3,600-mile trek in mammoth tractors that offer such luxuries as hot showers and game rooms**

**T**HE most powerful beast in Antarctica this winter will be a Russian snow tractor—a 35-ton monster that will plow across the bottom of the world by way of the South Pole.



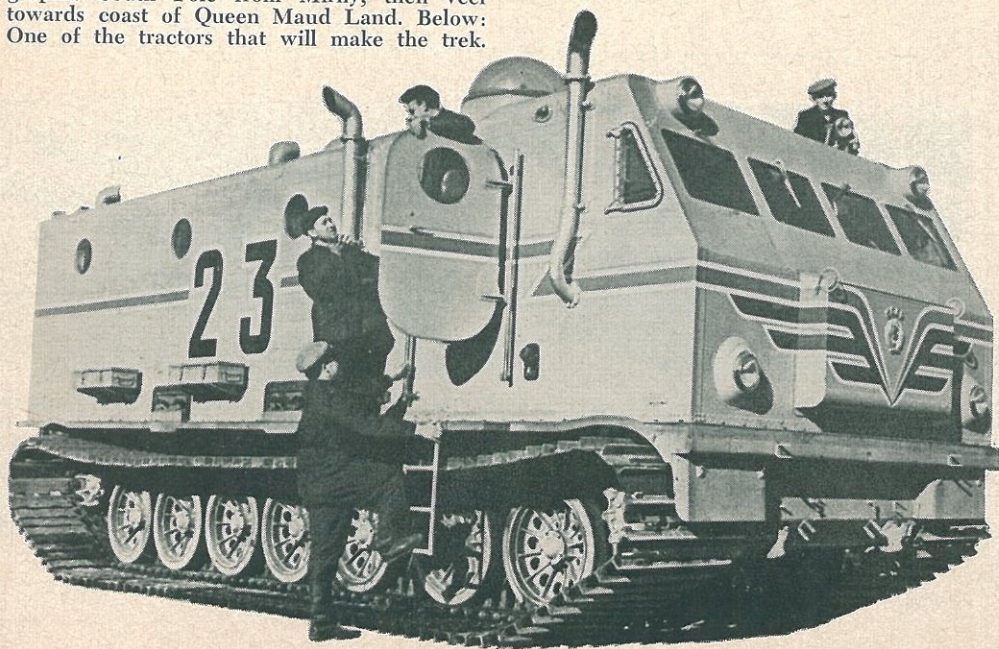
**RUSSIAN ROUTE:** Explorers will head for geographic South Pole from Mirny, then veer towards coast of Queen Maud Land. Below: One of the tractors that will make the trek.

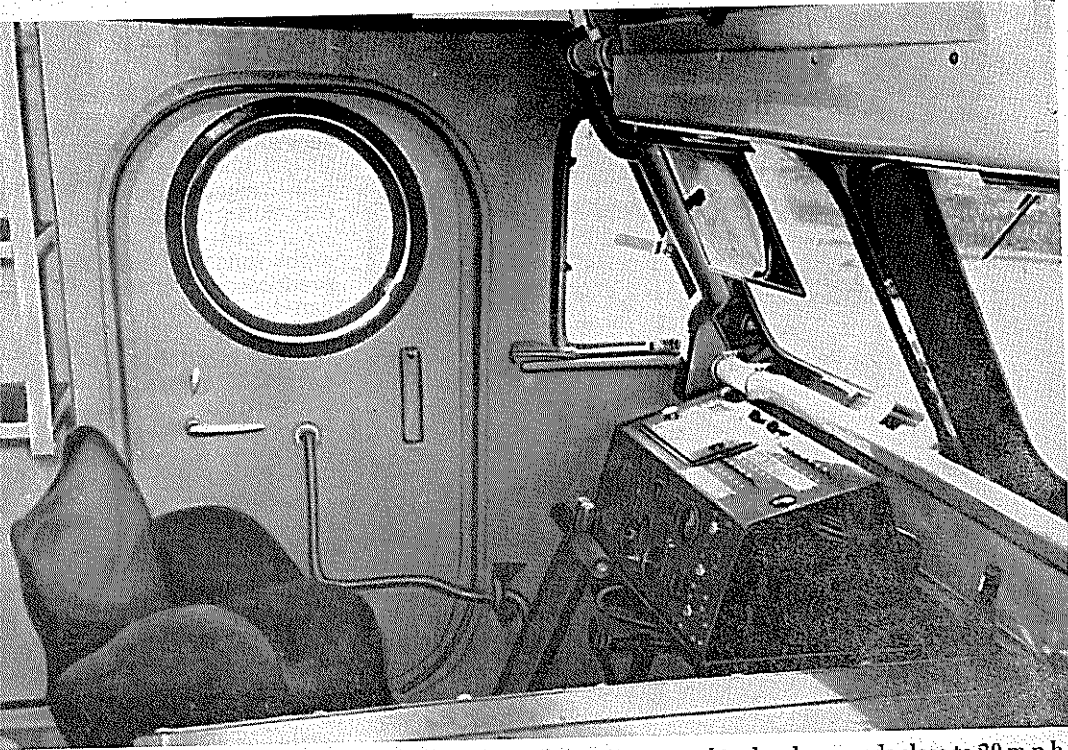
Snug inside the tractor and two sister vehicles will be 24 Soviet scientists who will attempt the longest Antarctic trek in history—a distance of 3,600 miles.

They plan to make the trip in style. They'll live in warm, air-conditioned cabins fitted with separate working, dining, sleeping, and recreational compartments. They'll make seismic and meteorological measurements cozily inside—reading data off transducers that have been recessed into the cabin's outer walls and roof.

At the end of a day's work the men will be able to take hot showers and relax in foam-rubber armchairs—or even read the day's mail, dropped by aircraft. Lest the bleakness of the constant ice-white world get too depressing, designers have colored the interiors in blues, browns, and greens, even added such bits of domestic fluff as homey table lamps and porthole curtains (which also serve to screen the glare).

Providing this luxury was no mean feat.





**THE DRIVER'S SEAT** is at the left of the control compartment. The navigator sits at his right. Despite the tractor's weight (35 tons) and bulk,

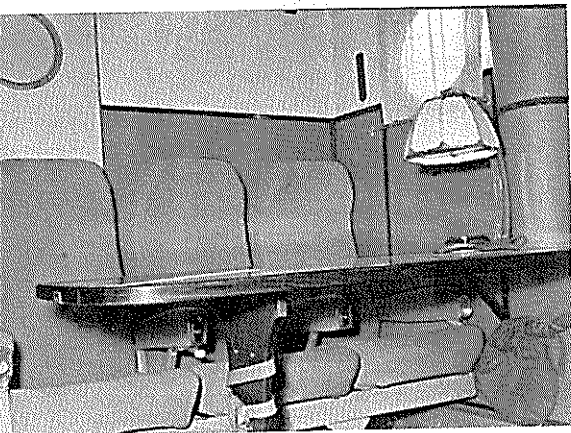
it's expected to develop speeds close to 20 m.p.h., climb 30-degree grades, and make tight turns. Watertight cabin makes tractor unsinkable.

Engineers had to make a vehicle that was big and powerful but still fast and maneuverable. It had to be made livable for months at a time.

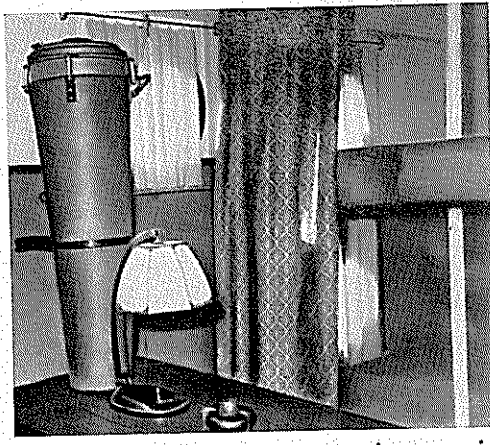
*The terrain* itself was their toughest problem: snow and ice, temperatures of

minus 95 degrees F., hurricane winds, and high mountains. To lick it, they started, logically enough, designing the tractor from the ground up. The tracks are the most important design feature of

[Continued on page 226]



**MESSROOM** aboard the tractor looks like the first-class compartment of the Russian TU-114 jet. Even the lamp is the same. Behind it can be seen one of the nine curtained ports.



**WORK ROOM** doubles as a recreation room in the evening. Besides table space there's a bookcase and a separate apparatus room. At right, part of the six-bunk bedroom shows.



### GUN ARMORED BY ALUMINUM

This is the Army's new aluminum-armored T-195 howitzer. It is a full-tracked, amphibious, self-propelled gun, so light—it weighs eight tons less than its predecessors—that it can be transported by air.

The weapon can carry a load of 89 rounds of ammunition—either standard howitzer shells or a newer, longer-range type. Its fire-control system has been simplified and its accuracy has been improved.



### FROG LEGS.

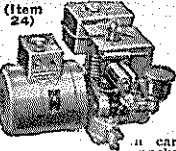
The British Westland helicopter at left resembles a giant frog straddling a bus. It is designed to carry field hospitals to battle areas; take on mobile workshops, field kitchens, radio units; act as a flying crane; or transport troops and other personnel, light and medium vehicles, or six tons of supplies.



**HANGING TV.** This wall television set is mounted on brackets in a corner. It's made in Britain by Philco, has a 21-inch tube, and is 16½ inches deep. The design saves floor space, provides flexibility in height and viewing distance.



**HIGH STEPPER.** The machine above was built at the University of California for spraying insecticide on crops of any height. The boom spray can be adjusted from ground level to five feet. Wheel distance can also be set to fit rows.



### 700 Watt Light Plant PUSH BUTTON START

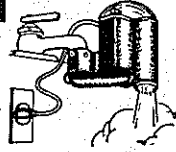
115 v. 60 cyc. Ac. Powered by a rugged 2.2 HP. easy starting Briggs engine. No wiring necessary; just plug in and operate. Plenty of current for any 91 burner, freezer, brooder, emergency lights, etc. which require up to 700 watts. Ideal for television and radios. Complete with voltmeter and built-in winding to charge 6 v. auto batteries. (Item 24) Wt. 75 lbs. Easily fits in car trunk. Be prepared if storm knocks out power lines. Reg. \$275. **\$143.50**

1200 Watt Plant (Item 45) same as Item 24 but larger generator and engine with 50% greater output. **\$199.50**

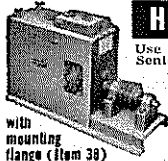
**ELECTRONIC BRAIN Now Available On All Our Plants Up To 100,000 Watts!** Allows plant to sputter along at a thrifty idle till electricity is called for. Then instantly . . . automatically, plant comes up to full speed with a steady 115 volts of power. When demand stops, the BRAIN returns plant back to that same thrifty idle. Saves gas, doubles engine life! If BRAIN desired, specify & add \$3 lb. and \$35 to plant price.

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### Russian Snow Cats to Prowl Antarctic

[Continued from page 91]

the tractors. Designers made them each a full meter (39 inches) wide to allow an even distribution of weight over as wide an area as possible. Then they laced them with snow grips—meter-wide metal frames with vertical ribs to dig into the granular snow.

Seven pairs of rubber-clad rollers, bearing on the tracks, support the hollow, sealed chassis through torsion bars.

Up front the designers put a 520-hp., 12-cylinder diesel engine, and added a supercharger to increase horsepower to 800-1,000. Supercharging will be especially important at the high altitudes—up to 12,000 feet—at which the vehicle may travel.

Tucked in beside the engine are a five-speed gearbox, steering mechanisms, two generators (yielding 13 kw.), and storage batteries.

In the rear are two heaters that draw in cold air, heat it, and send it through ducts in the cabin walls to nozzle openings in the cabin itself.

Also in the rear is a "self-recovery" winch. With its 100-foot steel cable, the winch can be used two ways: to facilitate hauling a 70-ton trailer, or to pull the tractor out of an icy crevasse if necessary.

Finally, engineers turned their attention to the cabin itself. Also hermetically sealed, it is 28 feet long, 12 feet wide, and seven feet high.

The control compartment, with room for driver and navigator, sits over the power section at the front end. Gear includes two radio receivers, a transmitter, a radio direction-finder, and radio and magnetic compasses. A transparent dome over the navigator's head houses an astrocompass.

Beyond the control compartment, there's a bunk room that sleeps six, a work room, a kitchen, a washroom and toilet, an apparatus room, a drying room, and a small foyer.

The designers would have liked to make the tractor amphibious. They couldn't. But they maintain it won't sink if it goes through the ice, because it's watertight; water can't rise above the floor of the cabin. Theoretically, the spinning tracks will tread water while the winch is made ready to get it back on the ice again.—Joan Steen.