ORNITHOLOGY

Nature Ramblings

By FRANK THONE

A Well-Groomed Minstrel

THE RED-WINGED blackbird is a handsome fellow and a stylish; he has caught the trick of cutting a dash with a somber costume relieved by a spot of bold color. His whole plumage is as black as the gown of the austerest of priests, and his yellow-edged red epaulettes are as eye-catching as those of the gaudiest hussar. That is only his warm-weather coat, however; in his winter resorts he is a mottled, nondescript bird you wouldn't recognize at all. Also, his mate wears an unpretentious mottled brown-and-gray garb the year around; you might take her for a thrush.

The red-wing is one of the most melodious of our spring singers; there is an appealing flute-like quality in his note that almost everyone likes. When he sings, he keeps up a constant heaving fluttering with his wings, as though the task cost him a good deal of effort. But he does not spare the labor, for he seems to like the sound of his own voice, and when he isn't singing he is chattering volubly.

He seems to have an especial liking for one kind of orchard pest, the cankerworm. It has been asserted that he will fly at least half a mile, passing over other good hunting spots, to get a supply of these worms from an afflicted orchard and carry them back to his nest for his fledglings.

To a certain extent, however, the red-wing shares the unpopularity that falls to the lot of his cousins, the grackles, because like them he is a social bird, travelling in flocks, and sometimes damaging grain fields. But his flocks are smaller, and so is his individual appetite, so that for the most part there is no complaint against him.

Science News Letter, March 19, 1932

ENGINEERING

Glass Replaced by Steel In World's Largest Radio Tube

THE LARGEST radio tube in the world, an apparatus of iron and steel weighing hundreds of pounds instead of the usual light-weight glass bulb, has been built in the laboratories of the Metropolitan-Vickers Company at Manchester, England, to replace 50 high-power tubes of a large radio station.

The new apparatus stands ten feet high and is 14 inches in diameter. Its input is 500 kilowatts.

The largest radio tube in America has an output of 200 kilowatts, which means that its input is about 300 kilowatts. It is made chiefly of glass and its vacuum is permanently sealed like that of a common electric lamp bulb. The British tube, however, is not permanently sealed. It is necessary to keep its pressure low by the occasional operation of an oil vacuum pump.

Engineers of the Metropolitan-Vickers Company see in the new tube a number of advantages over the older type. The vacuum will not become less as the tube ages, the difficult process of sealing off electrodes under vacuum has been avoided, and the tube has been built so that it can be readily torn down for repairs and reassembled, they claim. On the other hand, American radio operators are seeking greater distance by the use of short waves rather than great power, engineers in this country point out.

A discovery three years ago, during research which did not at all concern radio, makes possible the new vacuum tube. At that time scientists produced an oil which can be boiled at a fairly high temperature without decomposition and which has a rate of evaporation so low that at room temperature it can be put inside a radio tube without impairing the vacuum. This oil, used to replace mercury in the vapor vacuum pump, has taken the continuously evacuated tube from the hands of the physicist and placed it at the service of the engineer.

Science News Letter, March 19, 1932