dentin at the tips of the cusps however, often shows a more or less superficial staining. Examination of the sections for lesions is very easy because the carious areas take such an intense, conspicuous black stain.

For decalcification one should employ a 5 to 10% solution of sulfosalicylic acid instead of mineral acids which attack the silver deposits.

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Susceptibility of Field Mice and Meadow Mice to St. Louis Encephalitis.

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In the vicinity of St. Louis the 3 most common species of wild mice are the field mouse, *Reithrodontomys megalotis,* the house mouse *Mus musculus* and the meadow mouse, *Microtus ochrogaster.* As long ago as the epidemic of 1933 efforts were made to trap mice in the homes of encephalitic patients. Several field mice were captured but no representative of either of the other species were obtained in such homes. Beginning in 1934 we tested the susceptibility of field mice to the virus of St. Louis encephalitis and found that they can be infected both by intracerebral and intranasal inoculation. Harford, Sulkin and Bronfenbrenner[1] have reported that the house mouse, *Mus musculus,* is also susceptible to this infection.

More recently we have captured a large number of field mice and also have been able to capture a number of meadow mice. Tests for the susceptibility of these strains of mice to the encephalitic virus have been carried out using simultaneous tests on white Swiss mice for comparison.

[1] Harford, C. G., Sulkin, S. E., and Bronfenbrenner, J., PROC. SOC. EXP. BIOL. AND MED., 1939, **41**, 331.

The effect of the intracerebral injection of 0.030 cc of St. Louis encephalitic virus in dilutions of 10^{-1}, 10^{-2}, 10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} were tried in each species. In the case of the field mice some survivals were noted even in dilutions of 10^{-2} and the majority of the animals survived in dilutions of 10^{-4}, 10^{-5}, and 10^{-6}. In the case of white Swiss mice controls, there were no survivals in less than 10^{-6}. In meadow mice, no survivals were found in dilutions lower than 10^{-4}.

In one experiment using a number of resistant field mice, it was possible to show that animals inoculated intracerebrally with the virus showed no evidence of illness 10 days after the injection, yet were carriers of the virus in their brain tissue since the injection of this brain tissue into Swiss mice regularly resulted in the production of encephalitis. The brain emulsion of the first field mouse was then transferred to a second field mouse. This animal also remained well. Again after a period of 10 days, the brain of the second animal was shown to contain the virus when transferred to white mice. In like manner, the virus was carried through 4 successive transfers in field mice, the brain emulsion producing fatal encephalitis in white mice in each instance.

While we have captured a number of field mice in the homes of encephalitis patients, in no instance have we been able to detect the presence of the virus in the brain, naso-pharynx, spleen or other tissues in any of these animals. We have also examined the tissues of numerous field mice captured at random in various parts of St. Louis and St. Louis County, and in no instance have we been able to show that these animals are carriers of the virus. Field mice and meadow mice while a potential reservoir of encephalitis virus have not been shown to harbor the infection spontaneously.