four infective agents proved to be pathogenic for guinea pigs and hamsters as well as for mice. Three of the four viruses isolated were shown to be Western equine encephalomyelitis, by challenge inoculation of Western equine immune guinea pigs and by neutralization tests in mice with specific Western equine antisera. The fourth virus shows certain antigenic peculiarities; this requires further study, the results of which will be reported at a later date.

From the nest of an English sparrow, *Passer domesticus* (Linn.), which contained two dead nestlings, a collection of 400 mites was made on June 28, 1946. This included two species which have been identified as *L. sylviarum* and *Dermanyssus americanus* Ewing. The collection was divided into two pools of approximately 200 mites each for inoculation into experimental animals. The same techniques as outlined above were used. From one of these pools Western equine encephalomyelitis virus was isolated.

Now, in addition to *D. gallinae* (*7*), at least one other genus of mites (*Liponyssus*) has been found which is naturally infected with the Western equine virus. The fact that three and possibly four isolations were made from one bird's nest incriminates as the source of infection at least one of the birds then or previously occupying the nest. Thus, evidence has been obtained regarding infection of *wild birds*, a *Liponyssus* mite, and possibly a *Dermanyssus* mite of wild birds with the Western equine virus. This evidence is similar to that reported by Sulkin (*7*) with Western equine virus and Smith, *et al.* (*6*) with St. Louis virus in the case of chickens and chicken mites. However, until persistence of infection and transmission by bite under experimental conditions is demonstrated, we prefer to reserve further interpretation of the possible role played by mites. *Culex pipiens* Linn. and *Anopheles freeborni* Aitken have been found naturally infected with Western equine virus (*4*), but their role as vectors has been discredited since experimental transmission could not be demonstrated (*2*). St. Louis virus will persist for some time in several species of anopheline mosquitoes, but transmission has not been effected (*1, 8*). In this laboratory, over a period of six years, thousands of *D. gallinae* have been tested from encephalitis areas outside of California, all with negative results (*3, 5*). In Kern County, an endemic area where surveys have been made for the past four years, *D. gallinea* have not been found in any chicken houses.[3] This suggests that it is not an essential vector or reservoir in one of the outstanding endemic areas.

These matters are emphasized not to indicate that mites are not suspected as vectors, but with the hope of preventing uncritical quotation or interpretation of mite findings.

Addendum: In 1877 Canestrini and Fanzago (*Atti Reale Inst. Veneto Sci. Let. Art.*, Ser. 5, **4**, 124–125) described *L. sylviarum* as *Dermanyssus sylviarum* n. sp. In 1884 Canestrini (*Ibid.*, Ser. 6, **2**, 1659–1660) placed the species in the new genus *Leiognathus* and used the specific name *silviarum*. The latter spelling has been commonly used by workers in acarology, whereas, according to the *International Rules of Zoological Nomenclature*, the original spelling, *sylviarum*, is correct.

L. sylviarum is known as the feather mite, or Northern fowl mite. It is commonly found on a wide range of wild bird species and is a serious pest of chickens in the northern part of the United States. In appearance this mite closely resembles *D. gallinae* (common chicken mite) but differs biologically in that it has a pronounced tendency to remain on its hosts at all times, taking blood meals repeatedly, and even laying its eggs among the feathers where they may hatch. *D. gallinae* usually leaves its host after feeding and deposits its eggs in cracks and crevices. The larval stage of *L. sylviarum* does not take a blood meal, as do the nymphal and adult stages.

Several authors have reported these two species of mites as attacking man and producing a pronounced dermatitis. This has not been our experience, although it has been a common occurrence to have hundreds of specimens crawling on laboratory personnel working with heavily infested bird nests. No bites have been noted.

[3] Unpublished data.

References

1. Hammon, W. McD., and Reeves, W. C. *J. exp. Med.*, 1943, **78**, 241.
2. Hammon, W. McD., and Reeves, W. C. *J. exp. Med.*, 1943, **78**, 425.
3. Hammon, W. McD., and Reeves, W. C. *Amer. J. publ. Hlth*, 1945, **35**, 994.
4. Hammon, W. McD., Reeves, W. C., Benner, S. R., and Brookman, B. *J. Amer. med. Ass.*, 1945, **128**, 1133.
5. Reeves, W. C. *Proc. 49th annu. Meet. U. S. Livestock Sanit. Ass.*, December 1945.
6. Smith, M. G., Blattner, R. J., and Heys, F. M. *Science*, 1944, **100**, 362; *Proc. Soc. exp. Biol. Med.*, 1945, **59**, 136; *J. exp. Med.*, 1946, **84**, 1.
7. Sulkin, S. E. *Science*, 1945, **101**, 381.
8. Webster, L. T., Clow, A. D., and Bauer, J. H. *J. exp. Med.*, 1935, **61**, 479.

Effect of 2,4-D on Bean Progeny Seedlings

A. M. S. Pridham

New York State College of Agriculture, Ithaca

Seedlings of red kidney beans from parents sprayed with 2,4-D during the ripening of pods show a range of 2,4-D symptoms in the juvenile and mature foliage. Virus-like crisp foliage, dwarfing of growth, and serration and fusion of leaflets were noted in some degree in all seedlings. Parent plants were sprayed with 0.5 per cent and higher concentrations of 2,4-D amine salt. All seedlings showed characteristic 2,4-D injury. Unsprayed parents yielded normal seedlings.

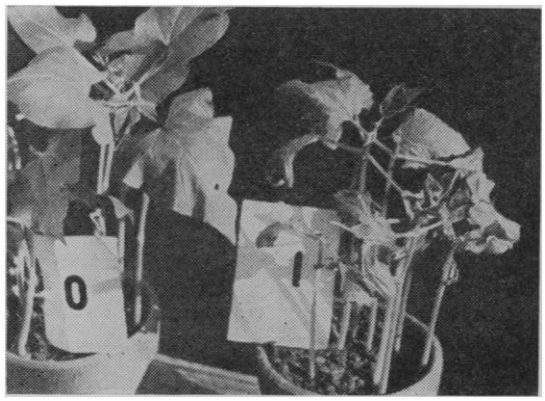

Fig. 1. Seedlings of normal habit from unsprayed parent (0) and those of dwarf habit, abnormal juvenile leaf texture, and fused mature leaf top (1) and of abnormal virus-like symptoms (1, bottom). These seedlings were from parent plant sprayed with 0.5 per cent 2,4-D.