

First, the surface should be broken up into large lumps by means of a breaker plow. This should be done in the fall, preferably after the first frost when the soil will be firm enough to work on. By this means, air will penetrate the soil to a greater depth, thereby hastening the drying out process. At the same time, under the action of frost, the sodium chloride in the soil will be drawn to the surface of the lumps where it will leach into the furrows, to be washed away by melting snow and the spring rains. If conditions permit, drainage ditches should be installed in such a manner as to intercept the furrows, in order to remove the surface water as quickly as possible.

After the spring rains have ceased, the ground should be thoroughly harrowed with a disc harrow, after which no further trouble should be experienced with surface cracks. However, if clay is the predominating ingredient, it may be necessary to repeat the process during the next season.

If it is desirable to prevent the growth of Phragmites (Fox Tail), about eight tons of Gypsum per acre should be added to the soil after which Red Top or other suitable grass, preferably one with creeping stems may be planted.

According to Dr. Joffe, the method outlined above has been used with considerable success in Holland, but is untried in this country as far as he knows.

Five Species of Mosquitoes, New to  
New Jersey, Found in Last Five Years

John B. Schmitt,  
Assistant Entomologist  
New Jersey Agricultural  
Experiment Station.

In the past few years five species have been added

to our New Jersey list. These species are: Aedes mitchellae (Dyar), Anopheles atropos D. & K., Anopheles walkeri Theob., Theobaldia inornata (Will.) and Megarninus septentrionalis D. & K.

The discovery of Anopheles atropos in New Jersey was announced by Dr. Leslie Stauber at the 29th Annual Meeting of the New Jersey Mosquito Extermination Association. The specimens were taken by Dr. Thurlow C. Nelson in Cape May County in 1928, and were identified by Dr. Nelson.

The very important finding of Anopheles walkeri in New Jersey was made by Mr. Robert Vannote of Morris County at Pine Brook, N. J. on July 10, 1938. During the same month a single badly mutilated specimen of Megarninus septentrionalis was submitted by Mr. O. W. Lafferty of Cape May County. A second specimen sent in by Mr. C. A. Doehlert was taken at Pemberton, N. J. on August 24th of that year. The identity of both the A. walkeri and the M. septentrionalis specimens was established by Dr. Robert Matheson of Cornell University.

Mr. John Flynn of Passaic County brought in a single specimen of Theobaldia inornata in August, 1941. This specimen was identified by Dr. Alan Stone of the U. S. National Museum. A second specimen was trapped by Mr. Fred Reiley at Port Republic in August, 1942.

During the summer of 1941 Mr. Reiley reported the trapping of a specimen of Aedes mitchellae in Atlantic County. On April 27, 1942 Mr. T. D. Mulhern found a pupa of this species in a woodland pool near New Egypt. The emerged adult was checked by Dr. Alan Stone. Another adult of this rare species was trapped by Mr. Lester Smith at Camp Kilmer in August, 1942.

It is interesting to note that four of the five additions may be credited to county mosquito workers. With these new species, our list contains forty species.

as follows:

1. Aedes atlanticus D. & K.
2. Aedes atropalpus (Coq.)
3. Aedes aurifer (Coq.)
4. Aedes canadensis (Theob.)
5. Aedes cantator (Coq.)
6. Aedes cinereus Meig.
7. Aedes dupreei (Coq.)
8. Aedes excrucians (Walk.)
9. Aedes grossbecki D. & K.
10. Aedes implacabilis Walk.
11. Aedes mitchellae (Dyar)
12. Aedes sollicitans (Walk.)
13. Aedes sticticus (Meig.)
14. Aedes stimulans (Walk.)
15. Aedes taeniorhynchus (Wied.)
16. Aedes trivittatus (Coq.)
17. Aedes triseriatus (Say)
18. Aedes vexans (Meig.)
19. Anopheles atropos D. & K.
20. Anopheles barberi Coa.
21. Anopheles crucians Wied.
22. Anopheles punctipennis (Say)
23. Anopheles quadrimaculatus Say
24. Anopheles walkeri Theob.
25. Culex apicalis Adams
26. Culex pipiens Linn.
27. Culex salinarius Coq.
28. Culex territans Walk.\*
29. Mansonia perturbans (Walk.)
30. Megarhinus septentrionalis D. & K.
31. Orthopodomyia signifera Coq.
32. Psorophora ciliata (Fabr.)
33. Psorophora columbiae (D. & K.)
34. Psorophora discolor (Coq.)
35. Psorophora ferox (Humb.)
36. Theobaldia inornata (Will.)
37. Theobaldia melanurus (Coq.)

38. Theobaldia morsitans (Coq.)
39. Uranotaenia sapphirina (O.S.)
40. Wyeomyia smithii (Coq.)

The name Culex restuans Theob. is also in use for this species.

Fresno, California Begins  
Mosquito Abatement

Fresno, California mosquito abatement district first official day July 1, 1942, under leadership of superintendent Adolph Preuss, No. 3800, south 99 Highway, Fresno, California. Fresno mosquito Abatement District, PO Box 2, phone 4-4537.

New Trap Record Forms Developed

Certain readers of Mosquito News will be interested to know that at least two enterprising entomologists have made automatic light traps which make hourly collections of adult mosquitoes. These plans have been developed by Mr. C. M. Gjullin, Bureau of Entomology and Plant Quarantine, 438 U. S. Court House, Portland, Oregon, and Ensign William M. Gordon, Entomologist H-V(S) USNR, Corpus Christi, Texas. No doubt photographs and specifications of their respective traps can be obtained from these workers.

New types of record sheets, for larval collections and trapping records for the species encountered in Texas, have been developed by Ensign Gordon who, we believe, will send sample forms to anyone interested. The Tennessee Valley Authority also has record sheets for larval dippings, adult catches and weekly report of Malaria Control Activities which can also be obtained, we believe, by writing the Health and Safety Department of the Tennessee Valley Authority.