

OBSERVATIONS ON THE FERTILITY OF THE BLACK WIDOW SPIDER

GILBERT WRIGHT

Illinois State Museum, Springfield, Illinois

The following preliminary notes relate to the fertility of a captive black widow spider, *Latrodectus mactans*. During the past two or three years an increasing number of specimens have been reported locally. A gravid female was presented to the museum on November 16, 1939 by Mr. Fred Hanson of Springfield. The specimen was placed in a specially constructed glass sided box and observed for a period of over 5 months. The following table presents a summary of the observations:

vided and a single meal worm (*Tenebrio*) was fed to the specimen every four or five days.

The young, from each hatching, were confined in a 500 cc. container and it was noted that they began to feed on each other from the 5th to the seventh day after hatching.

After three months egg sac No. 4 was opened and found to contain 310 eggs somewhat shrivelled. The cause for the failure of the eggs to hatch was not definitely determined. There were no evi-

| Sac Number | Date Eggs were Laid | Date Eggs Hatched | Period of Incubation | No. of Young |
|-----------------------------|-------------------------------|-------------------|----------------------|--------------|
| 1 | Nov. 29, 1939 | Dec. 31, 1939 | 32 days | 300 |
| 2 | Dec. 18, 1939 (19 days later) | Jan. 18, 1940 | 31 days | 287 |
| 3 | Jan. 7, 1940 (18 days later) | Jan. 20, 1940 | 13 days | 100 |
| 4 | Jan. 22, 1940 (15 days later) | Did not hatch | ----- | --- |
| 5 | Jan. 30, 1940 (8 days later) | Feb. 27, 1940 | 28 days | 319 |
| 6 | Feb. 20, 1940 (21 days later) | Mar. 14, 1940 | 23 days | 260 |
| 7 | Mar. 3, 1940 (12 days later) | April 2, 1940 | 28 days | 300 |
| Total number of young | | | | 1566 |

Conditions for egg incubation were probably ideal. Temperature of the room in which the subject was kept averaged 70-80° F. Adequate moisture was pro-

dences of Parasitism. Dehydration is suggested as a possible explanation.

All young were produced from a mating that had occurred before the specimen was brought to the museum.