

Observations on Periodical Cicadas (Brood XXIII) in Indiana in 1976

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Brood XXIII of 13-year cicadas emerged in late May and early June, 1976 in the lower Wabash and White River valleys. Light emergences occurred before May 17, but all emergence seemed delayed by cool, rainy weather. Cicadas did not begin to call until late in May.

Twelve stations established in 1963 were checked for emergence on May 17. Cicada exuviae were found on that date only at Thomas Say's grave in New Harmony. On May 22-24 all except 2 of the 12 stations showed positive evidence of cicada emergence and adults or exuviae were collected. On June 4 all 12 stations were positive and specimens were collected or choruses recorded.

The twelve stations established are as follows: Knox County, West Fork White River, at U.S. Hgw. 150; Daviess County, West Fork White River at U.S. 150; Gibson County, S. edge West Fork White River at U.S. 41; Gibson County, 1 mi. N. Patoka on U.S. 41; Posey County, 3 mi. N.E. New Harmony on Ind. Hgw. 68; Posey County, New Harmony, Thomas Say memorial and grave; Warrick County, 0.5 mi. west Vanada on Ind. 66-662; Warrick County, Yankeetown on Ind. 66-662; Spencer County, Richland, on Ind. 161; Warrick County, 2 mi. E. DeGonia Springs on U.S. 460; Spencer County, Little Pigeon River at U.S. 460. Additional collections were made in Sullivan and Vanderburgh Counties. Cicadas were also collected in Posey County by Gene Kritsky (Univ. of Illinois).

All of the stations listed above were checked during the emergences of Brood X (1970) and Brood XIV (1974), but no signs of cicada emergence were found at the time of emergence. In July, 1970, evidence of oviposition (flagging) was observed in Knox and Spencer Counties and emergence of Brood X was reported from Vanderburgh and Knox Counties (Young, 1971). These indications and emergences were not, however, in the immediate area of the stations indicated for Brood XXIII. Brood XIV did not overlap in any area with Brood XXIII.

A general impression from our work in 1976 is that the emergence was not as heavy as in 1963. Large choruses were not found and emergence was not in any areas as heavy as that of Brood X in many places in 1970.

Marlatt (1923) reported that periodical cicadas of Brood XXIII emerged in 1911 in Bartholomew, *Daviess*, Fayette, Floyd, *Gibson*, Jackson, Jennings, *Knox*, Montgomery, Owen, *Posey*, Putnam, Ripley, *Spencer*, *Sullivan*, *Vanderburgh*, Vigo, and *Warrick* Counties. The counties italicized were reconfirmed in both 1963 and 1976, but no indications could be found in the other counties in 1963 or 1976, despite several searches. No reports of emergence were received from other entomologists.

In the collections made *Magicicada tredecim* (Walsh and Ripley) and *M. trecassini* (Alexander and Moore) predominated. Both were present at all the stations, but *M. tredecula* (Alexander and Moore) was not taken or observed, but probably occurred in the area. It was recorded in 1963 by Hamilton and Cleveland (1964).

Voucher specimens for the collections are in the Field Museum, Chicago.

References Cited

- HAMILTON, D. W. and M. L. CLEVELAND. 1964. Periodical cicadas in 1963, Brood 23. Proc. Indiana Acad. Sci. 73:167-170.
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1975. Observations on periodical cicadas (Brood XIV) in Indiana in 1974 (Homoptera: Cicadidae). Proc. Indiana Acad. Sci. 84:289-293.