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OBSERVATIONS ON *TORVOTHRIPS KOSZTARABI*
(THYSANOPTERA: PHLAEOTHRIPIDAE)
INHABITING COCCOID GALLS

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ABSTRACT

Observations are given on the biology and protective behavior of *Torvothrips kozstarabi* Johansen, which inhabits galls of the coccoid *Olliffiella cristicola* Cockerell on Emory oak, *Quercus emoryi* Torrey in southeastern Arizona. The galls and their inhabitants are described, including the immature stages of the thrips. The mean frequency of infested galls over several sampling dates in different years was 25%. Twelve other species of arthropods were found in the galls.

RESUMEN

Se dan observaciones sobre la biología y el comportamiento defensivo de *Torvothrips kozstarabi* Johansen, la cual vive en las agallas del coco, *Olliffiella cristicola* Cockerell, en la encina de Emory, *Quercus emoryi* Torrey, en el sur de Arizona. Las agallas y sus habitantes se describen, incluyendo los estadios inmaduros de los trips. El promedio de infestación de las agallas, tomado en varias fechas de prueba durante varios años, fué de 25%. Doce otras especies de artropodos fueron encontradas en las agallas.

An association of a thrips, *Torvothrips kozstarabi* Johansen, and a scale insect was observed in galls produced by *Olliffiella cristicola* Cockerell (Homoptera: Kermesidae) on Emory oaks, *Quercus emoryi* Torrey, in southeastern Arizona. While only limited information is available on species of thrips in other genera living in plant galls produced by insects or mites (Priesner 1926-1928, 1964; Ananthakrishnan 1956), all 5 species in the genus *Torvothrips* live inside oak leaf galls produced by *Olliffiella* scales (Johansen 1980).

My observations, as well as those of B. A. Foote (1976 personal communications), were made on galls collected in the vicinity of the Southwestern Research Station (SWRS) of the American Museum of Natural History, near Portal, Arizona, between 1966 and 1978.