

## **RECOLONIZATION OF SURFACE-MINED LANDS BY POCKET GOPHERS (*GEOMYS BREVICEPS*) IN EAST TEXAS POST OAK SAVANNAH**

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Surface mining involves the use of heavy equipment that would theoretically create underground vibrations sensed by pocket gophers. To determine if vibrations cause pocket gopher movement away from areas being mined, gopher movements were monitored in a hay field adjacent to an active mine pit on Big Brown Mine in Freestone County, Texas. Gophers were live-trapped in summer 2000 prior to mining activity, injected subcutaneously with a passive integrated transponder (PIT) tag, and released. Coordinates of each capture location were recorded. After mining began and spoil piles were established adjacent to the field, re-trapping was conducted. Upon capture each pocket gopher was scanned for a PIT tag and newly caught animals were tagged. Location coordinates were recorded to determine movement between capture sites. Of the 58 gophers captured and tagged, 9 individuals were recaptured. Pocket gophers did not appear to move away from mining activity, so they might have been adversely affected. However, the number of individuals in the population remained constant during the study, indicating there was no population effect. During January and February 2001, all remaining non-mined and reclaimed lands within the mine were surveyed for pocket gopher activity (mounds). Activity was found on non-mined land adjacent to reclaimed land but no activity was found on reclaimed land. Pocket gopher populations did not reestablish on reclaimed lands because of the removal of sandy soils and subsequent replacement with hard, loamy soils. If pocket gophers are desired on reclaimed lands, then it would be important to retain areas of topsoil containing at least 80% sand.

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