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Additional Notes on December Breeding in the Plains Pocket Gopher (*Geomys bursarius*) in North Texas

LTC Richard M. Pitts[1], Howard M. Huynh[2], Cody W. Thompson[3], and Karl F. Marath[4].

[1]Junior ROTC Department, North Dallas High School, 3120 N Haskell, Dallas Independent School District, Dallas, TX, USA 75204.
[2]Department of Biological Sciences, Texas Tech University, Lubbock, TX, USA 79409.
[3]Museum of Zoology, University of Michigan, 1109 Geddes Avenue, Ann Arbor, MI, USA 48109.
[4]School of Medicine, Texas Tech University, Lubbock, TX, USA 79409
Corresponding author e-mail: rpitts@dallasisd.org.

The duration of the breeding season for the plains pocket gophers, *Geomys bursarius*, varies across the species' known geographic distribution (Connior 2011). In Texas, the period of reproduction for *G. bursarius* was reported to begin no earlier than late January and extends through October (Schmidly 2004). Previous research over a ten-year period in Texas supports this; however, Pitts et al. (2005) documented female *G. bursarius* carrying fetuses from as early as late January through November. The gestation period averages approximately four weeks (Bee et al. 1981), though a captive individual exhibited a gestation period of over seven weeks (Sudman et al. 1986). Typically, only 1 litter is produced in a season (Connior 2011), with 2.5 pups constituting an average litter size (Pitts el al. 2005). This paper documents evidence for copulation during the month of December, thereby confirming a year-round breeding within *G. bursarius* in Texas.

On 2 January 2009, eight female and one male *G. bursarius* were captured 2.3 mi SE of Alvarado (32 27′ 616″ N, 97 12′ 249″ W) in Johnson County, Texas. One female had four fetuses (2 in each of the left and right uterine horns) measuring 10 mm crown-rump, six had obvious swollen uterine horns, and one showed no evidence of reproduction. The one male *G. bursarius* was scrotal and had testes measuring 18 mm in length, with respect to *Geomys*, testes size rather than testes position is a more reliable measure of reproductive potential, males with testes measuring $>$ 12.5 mm containing spermatozoa (Connier 2011). All nine specimens are currently housed in the mammal collection at the Fort Hays Sternberg Museum (FHSM), Fort Hays University, Hays, Kansas (Table 1).

On 31 January 2009, three additional *G. bursarius*, one male and two females, were collected at the Joshua High School, Joshua, Johnson County, Texas (32 27′ 035″ N, 97 23′ 025″ W). The one male was scrotal and had testes length of 20 mm, and the females were pregnant with 5 and 4 fetuses, respectively. The fetuses measured 20 to 22 mm crown-rump indicating that copulation occurred in December. These specimens are currently housed in the Mammal collections at FHSM and Tarleton State University (TSU), Stephenville, Texas (Table 2). These records provide definitive evidence that *G. bursarius* breed in December and possibly throughout the year in Texas (Pitts 2005).

Table 1. Adult specimens of *Geomys bursarius* collected on 2 January 2009 from Johnson County, Texas, 2.3 mi SE Alvarado (32 27′ 616″ N, 97 12′ 249″ W). All specimens were deposited in the mammal collection at the Fort Hays Sternburg Museum (FHSM). External measurements (recorded in mm). TL = total body length, including tail; TV = length of tail, base to tip; HF = length of right hindfoot; E = length of ear, notch to tip.

FHSM Catalogue Number	Sex	TL	TV	HF	E	Reproductive Condition
39211	F	223	55	28	5	Swollen uterine horns
39212	F	226	64	29	5	Swollen uterine horns
39213	F	235	70	29	5	no embryos
39214	F	224	59	29	5	Swollen uterine horns
39215	F	242	65	30	5	Swollen uterine horns
39216	F	235	66	29	5	Swollen uterine horns
39217	F	225	56	27	5	Swollen uterine horns
39218	F	228	64	28	5	4 embryos
39219	M	262	64	31	6	Scrotal testes

Table 2. Adult specimens of *Geomys bursarius* collected 31 January 2009 from Johnson County, Texas, Joshua High School (32 27′035″ N, 97 23′025″ W). Specimens were deposited in the mammal collection at the Fort Hays Sternberg Museum (FHSM) and Tarleton State University (TSU). External measurements (recorded in mm): TL = total body length, including tail; TV = length of tail, base to tip; HF = length of right, hindfoot; E = length of ear, notch to tip.

Catalogue Number	Sex	TL	TV	HF	E	Reproductive Condition
FHSM 39220	M	254	62	33	6	Scrotal testes
FHSM 39221	F	242	68	30	5	5 embryos
TSU 1821	F	228	60	30	5	4 embryos

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