

## Late Season Chorusing by Blanchard's Cricket Frogs

*Acris blanchardi* (= *crepitans blanchardi*) has been reported active in Kansas as late as 14 November and between air temperatures of 42°-100°F (Burkett 1984, Clarke 1958, Collins *et al.*, 2010). However, chorusing has only been reported during more restricted seasons (Clarke 1958). Though chorusing in the species typically is associated with breeding, and in Texas and Louisiana may occur during any month (Bayless 1969, Blair 1961), Collins *et al.* (2010) note that in Kansas "chorusing does not always indicate breeding activity." They do not mention observed calling dates outside the normal Kansas breeding season.

On Monday 4 November 2013 at 11AM CST, PAP heard a small (5-7 males) chorus of *Acris blanchardi* calling from a steel culvert beneath a rural driveway (Lat 38.796853, long -95.332731, elev 1070ft). Water accumulation in the culvert was <2cm. The site is approximately 50m from a pond used by the species. Air temperature at the site was 14.5°C (58°F). Humidity was 71%, dew point 49°F, barometer 29.91 and rising (Weather Underground <http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KKSABLDW5&month=11&day=4&year=2013>) through late morning. The preceding two days were sunny with high temperatures of 60°-62°F. Saenz *et al.* (2006) found that *Acris crepitans* calling associated with breeding was more influenced by temperature than by precipitation. No breeding activity was evident during the calling reported here, and chorusing ceased within 3 hours.

*Acris blanchardi* is a typical *r*-selected species with short adult life span (essentially annual population turnover), high fecundity, and rapid development to maturity (Burkett 1984). Selection for plasticity in chorusing and breeding season(s) has survival value to such species (see discussion in O'Donnell and Rayburn 2009).

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## Lined Snake (*Tropidozon lineatum*) predated by Eastern Racer (*Coluber constrictor*) in Central Nebraska

Eastern Racers (*Coluber constrictor*) consume a variety of vertebrates as food resources. Prey items are known to include amphibians, mammals, reptiles, and invertebrates (Fitch 1999, Halstead *et al.* 2008). Adult *C. constrictors* also have been shown to consume juveniles of their own species (Jackson 1971). In northeastern Kansas, Fitch (1999) observed *C. constrictor* to feed occasionally on small snakes. Of 184 prey items, snakes only accounted for 6% of observations including 4 Common Garter Snakes (*Thamnophis sirtalis*), 3 Brown Snakes (*Storeria dekayi*), 1 Eastern Racer (*C. constrictor*), 1 Ringneck Snake (*Diadophis punctatus*), 1 unspecified snake, and 1 Lined Snake (*Tropidozon lineatum*).

On 29 August 2013, we observed a regurgitated *T. lineatum* inside a funnel trap with two *C. constrictor*. The regurgitated *T. lineatum* was partially digested. The *T. lineatum* apparently was consumed by one of the *C. constrictors* prior to their capture, as no other species of vertebrates were present in the trap. Habitat surrounding the funnel trap consisted of a disturbed, sandy pasture near a slough in the floodplain of Platte River in Hall County, Nebraska (40.79526°N, 98.45672°W; NAD 1983). The primary vegetation of the location is Kentucky bluegrass (*Poa pratensis*), buffalo bur (*Solanum rostratum*), and prairie cordgrass (*Spartina pectinata*). According to a survey of herpetofauna at the Crane Trust by Geluso and Harner (2013), *C. constrictor* is not common. Only two individuals were captured during their study, and both were subadults. During the same study, *T. lineatum* represented the fifth most common species captured (Geluso and Harner 2013). Our observation represents the first observation of *C. constrictor* preying on *T. lineatum* in Nebraska and only the second reported observation

of this predator-prey relationship throughout the distributions of these two snake species. As noted above, the previous observation was reported by Fitch (1999) in northeastern Kansas. Specimens were deposited and verified by Curtis Schmidt, Sternberg Museum of Natural History, Fort Hays State University, Hays, Kansas (FHSM 16564 and 16582).

We thank the Crane Trust for permission to conduct research on their land and for providing us with support for constructing, maintaining, and checking our traps.

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### Fort Leavenworth Herpetofaunal Survey for 2013

The fourth annual Fort Leavenworth Herpetofaunal Survey was conducted on Saturday, 20 April 2013, with 12 participants. Over the following several weeks, survey sites were rechecked, augmenting the number of both species and specimens observed. A combined total of 98 specimens representing 16 species were observed. This marked the second consecutive year the project was conducted in fulfillment of Eagle Scout requirements, with Logan Burkey earning that rank this year.

Materials used as artificial cover objects include existing boards, carpet, and tin as well as additional tin placed since previous surveys. Two new sites were created; one in bottomland along the Missouri River (which proved unproductive this year) and one in the southeast corner of the installation.

Participants were divided into groups with at least one experienced herper in each group for the formal survey. Chris McMartin conducted subsequent surveys both solo and with Matt Jeppson. A coworker also submitted observations which Chris verified. The total person-hours spent deliberately searching (both during

the formal survey and additional survey periods; not counting incidental observations) was 31:06.

The Leavenworth area experienced unusually low temperatures, when compared to historical averages, during spring 2013. The general trend for the week prior to the formal survey was much cooler conditions, and higher rainfall, than historical averages. Precipitation during the week leading up to the survey was higher than average, and year-to-date precipitation as of the survey date was also slightly above the historical average—7.64 inches compared to 7.13 inches. Month-to-date precipitation was 2.80 inches, slightly higher than the historical average of 2.23 inches.

The survey date started with a low temperature of 32.0 degrees Fahrenheit occurring at 4:00 am and persisting through 7:00 am. A temperature and relative humidity spot reading was taken on-site using a commercially available digital thermometer/hygrometer at 10:40 a.m., registering 51 degrees Fahrenheit and 31% humidity with partly cloudy skies. At the conclusion of the survey at 3:10 p.m. another spot reading was taken, registering 59 degrees Fahrenheit and 30% humidity with scattered clouds. The moon phase at this time was a waning gibbous, with last quarter officially on 24 April.

A total of 98 animals were observed during the official survey on 20 April 2013 as well as during informal surveys in the following weeks. Significant finds this year were the discovery of two Great Plains Narrowmouth Toads (not documented from the installation since 1940) and two Three-toed Box Turtles (never documented from the installation). Other animals noted were the American Toad (3), Blanchard's Cricket Frog (1), American Bullfrog (1), Cope's Gray Treefrog (6), Western Narrowmouth Toad (2), Five-lined Skink (22), Common Gartersnake (3), Copperhead (1), North American Racer (2), Western Milksnake (7), Western Ratsnake (1), Western Ribbonsnake (1), Western Worm Snake (2), Ring-necked Snake (43), Painted Turtle (1), Three-toed Box Turtle (2)

The continued success of this survey is due in large part to the efforts of local citizen-scientist volunteers. Participants this year were Anemone Burkey, Chloe Burkey, Brigham Burkey, Drew Burkey, Logan Burkey, Salix Burkey, Chris Heatherly, Kristin Hopper, Matt Jeppson, Chris McMartin, Cameron Peebles, Julio Rodriguez, Brandon Wolfsohn, and Jim Wolfsohn.

Special thanks to Matt Nowak, for his extensive coordination with various installation agencies to enable the survey to be conducted, and the provision of placards for marking the cover items. George Pisani, for his provision of additional tin to augment the transect sites.

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