

**Herpetological Survey  
of Eastern South Dakota...2005  
(Species Account)**

Tom Jessen...Mankato, Minn.

During the 2005 field season...Of the 15 Snake species known to inhabit South Dakota...9 were documented in the eastern counties. Of the 7 species of turtles...4 were found. Of the 15 amphibians...12 were encountered. Only 1 species of Lizard...the **Prairie Skink** was seen.

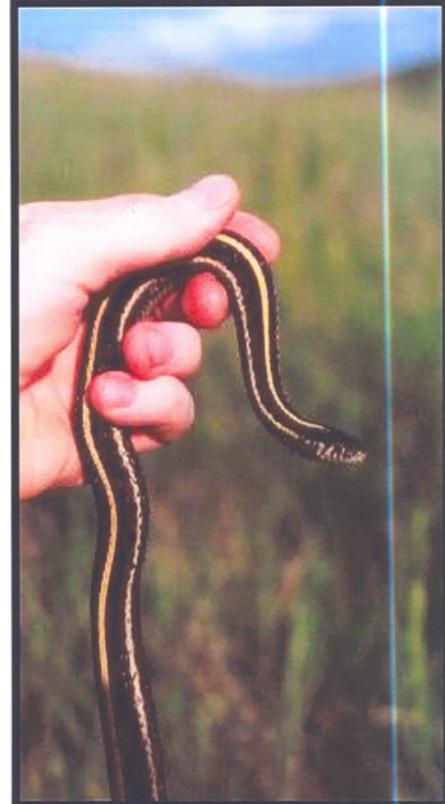
The **Snakes** found during this year include: **The Plains Garter Snake** (*Thamnophis radix*) **The Common or Red-Sided Garter Snake** (*Thamnophis sirtalis*) **The Redbelly Snake** (*Storeria occipitomaculata*) **The Lined Snake** (*Tropidoclonion lineatum*) **The Plains (or Western) Hognose Snake** (*Heterodon nasicus*) **Prairie Ringneck Snake** (*Diadophis punctatus*) **Racer** (*Coluber constrictor*) **The Fox Snake** (*Elaphe vulpina*) **The Bullsake** (*Pituophis catenifer*). Snakes previously documented in the state but were not found were: The Wandering Garter Snake (*Thamnophis elegans*) The Water Snake (*Nerodia sipedon*) The Brown Snake (*Storeria dekayi*) The Red Milk Snake (*Lampropeltis triangulum*) Eastern Hognose Snake (*Heterodon platirhinos*) Smooth Green Snake (*Liochlorophis vernalis*) and The Prairie Rattlesnake (*Crotalus viridus*)

. **Turtles** found in this area include: **The Painted Turtle** (*Chrysemys picta*) **Snapping Turtle** (*Chelydra serpentina*) **Spiny Softshell Turtle** (*Aplone spinifera*) **Smooth Softshell Turtle** (*Apalone mutica*)  
. Turtles Not found were: The False Map Turtle (*Graptemys pseudogeographica*) Western Ornate Box Turtle (*Terrapene ornata*) or The Blandings Turtle (*Emydoidea blandingii*)

**Amphibians** encountered include: **Northern Leopard Frog** (*Rana pipiens*) **Wood Frog** (*Rana sylvatica*) **Bullfrog** (*Rana catesbiana*) **Plains Toad** (*Bufo cognatus*) **American Toad** (*Bufo americanus*) **Canadian Toad** (*Bufo hemiophrys*) **Woodhouses Toad** (*Bufo woodhousei*) **Eastern Gray Treefrog** (*Hyla versicolor*) **Copes Gray Treefrog** (*Hyla chrysocelis*) **Chorus Frog** (*Pseudacris* sp.) **Cricket Frog** (*Acris crepitans*) **Tiger Salamander** (*Ambystoma tigrinum*). Amphibians Not found were: The Plains Spadefoot Toad (*Scaphiopus bombifrons*) and The Mudpuppy (*Necturus maculosus*).

**Garter Snakes.** Both the **Plains** and **Red-sided** Garter Snakes proved to be quite common in the eastern counties. Both varieties were found near

water while the Plains Garters were often encountered farther away in the dryer uplands.



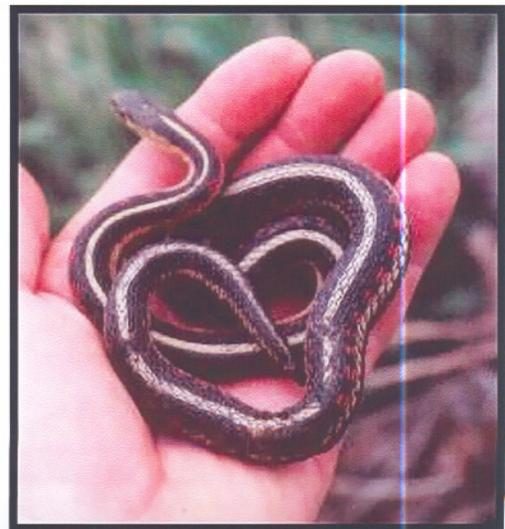
The **Plains Garter** is much less aggressive than the Common Garter, rarely biting when captured but will give off a pungent, musky odor when handled. The Common **Red-sided Garter Snake** is much more aggressive and also more brightly colored.



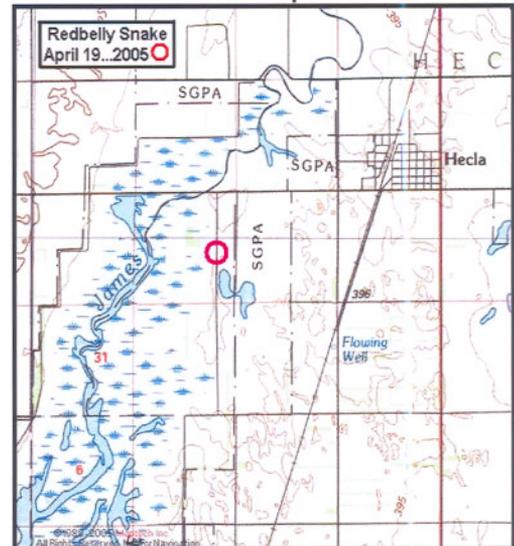


Many of these snakes exhibit the most intense red coloration. It seems the farther west you go...the brighter they get. Some of these have the red pigment extending all the way down the underside of their body. This color phase is becoming known as the "Flame Garter."

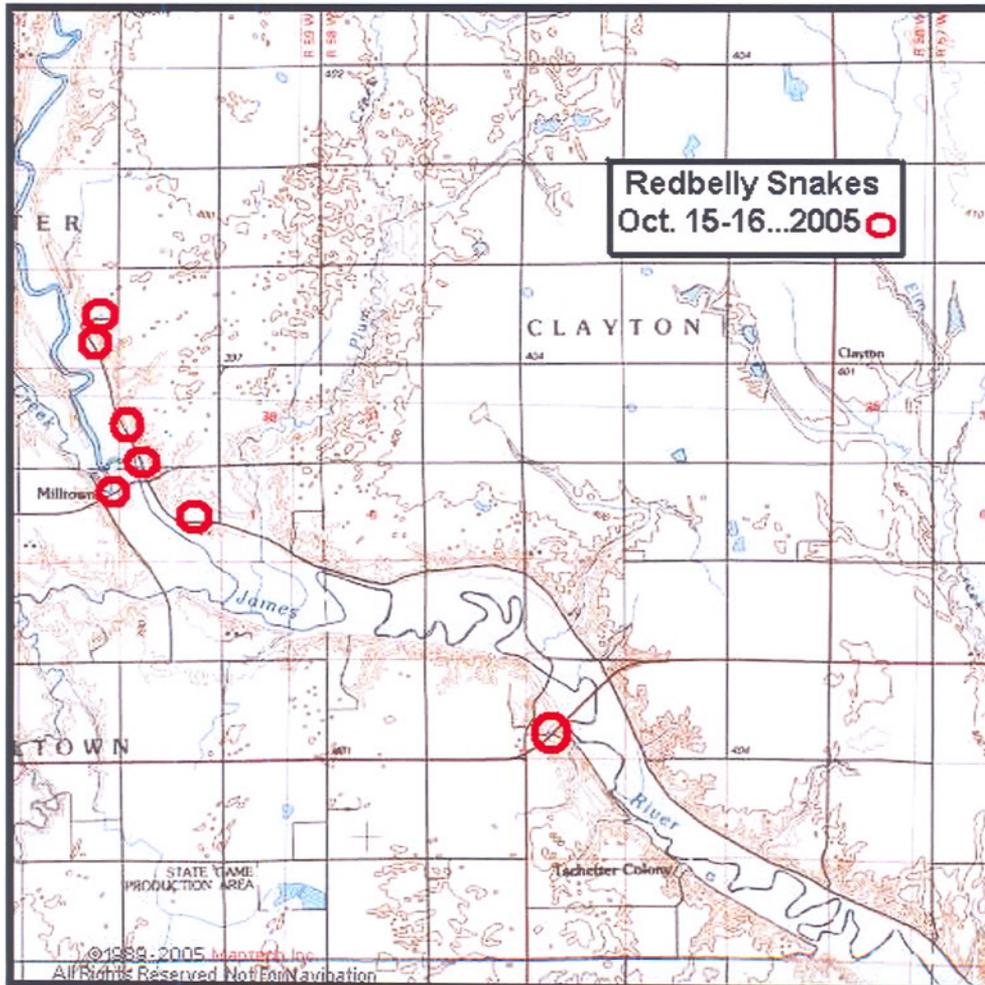
Many of these snakes show extensive scarring. This is a common sight with these active snakes. The specimen down below had numerous old healed wounds and was nearly missing most of its tail. This one was so aggressive that it could barely be handled!



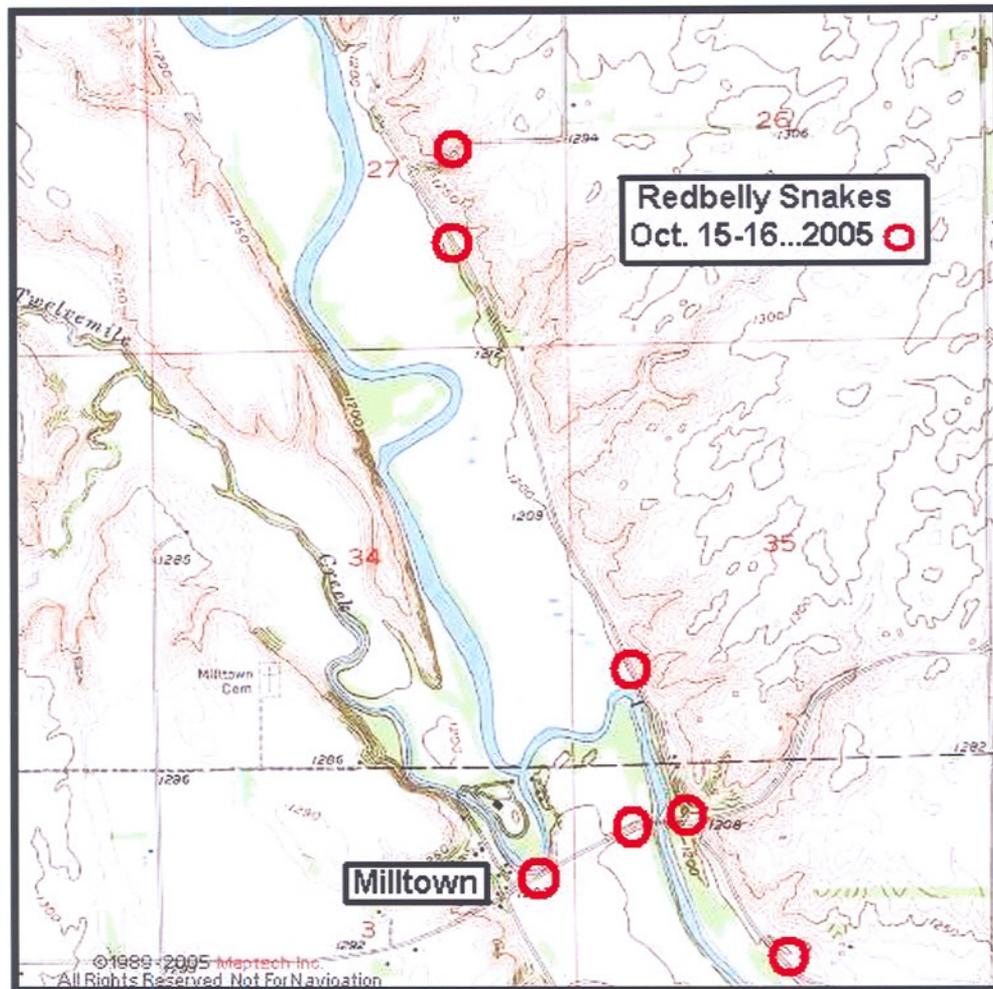
**Redbelly Snakes:** These small snakes are gradually being found farther west every year. On April 19...A single dead specimen was found at the Sand Lake NWR in Brown Co. A few have been found there in the past.



In October...they were discovered in the James River Valley at Milltown. A total of 6 road-killed and 2 live specimens were found. (Hutchinson Co.)

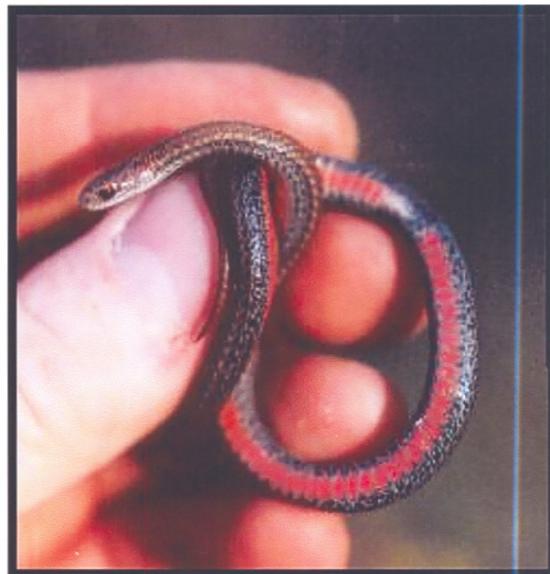
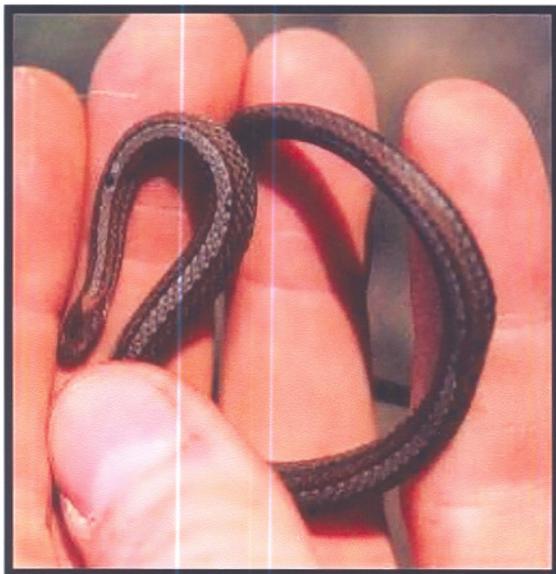


Whether this is a separate, isolated colony is not yet known. The nearest known population is at Lake Alvin...60 miles to the east. A single specimen is recorded from the Pickstown Dam 50 miles to the south west.

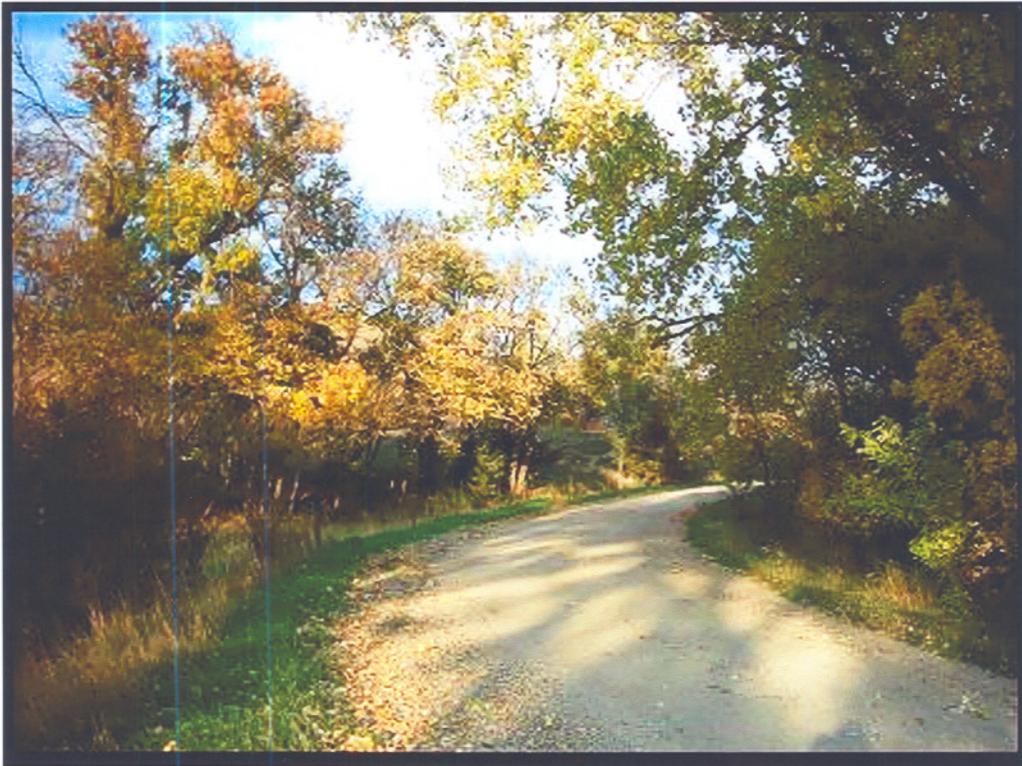
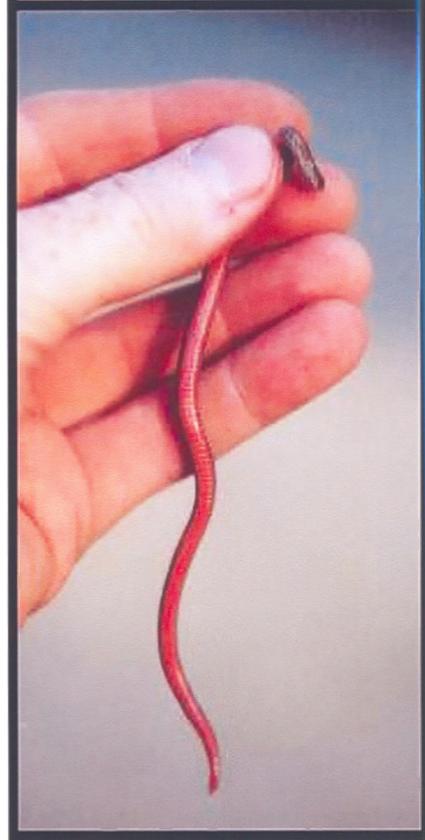


This part of the valley is mostly prairie...however all specimens were found not far from groves of trees. These snakes were leaving the lowland river bottoms and heading up to the dry prairie hills to spend the winter.

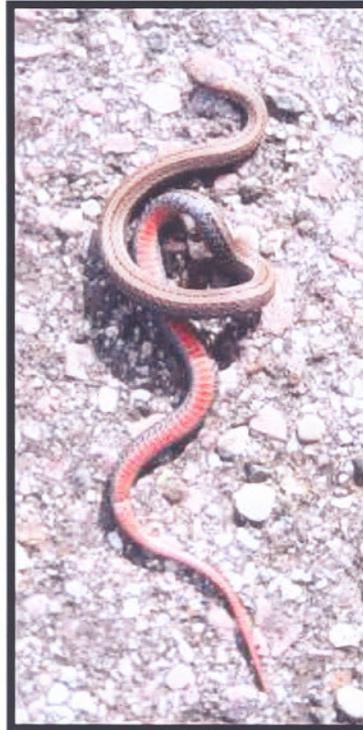
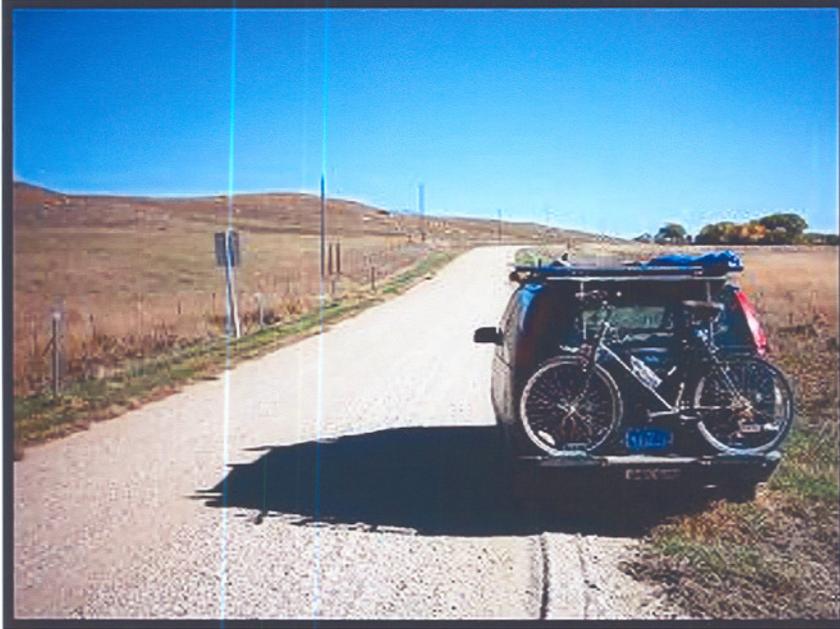
The first live one found was a dark phase individual. It was laying in the shade of the trees and was very cold. This is a strange habit I've noticed with this species. Even on a warm, sunny, late afternoon...they seem to prefer crossing the roads Not in the warm sunshine but instead in the shade of the trees. This makes for a good photo opportunity for when one is picked up off the ground...it remains perfectly motionless for about one minute. Shortly after that they suddenly come to life and absolutely refuse to remain still...escape being the only thing on their mind.



The Second live one found was a spectacular gold variety.

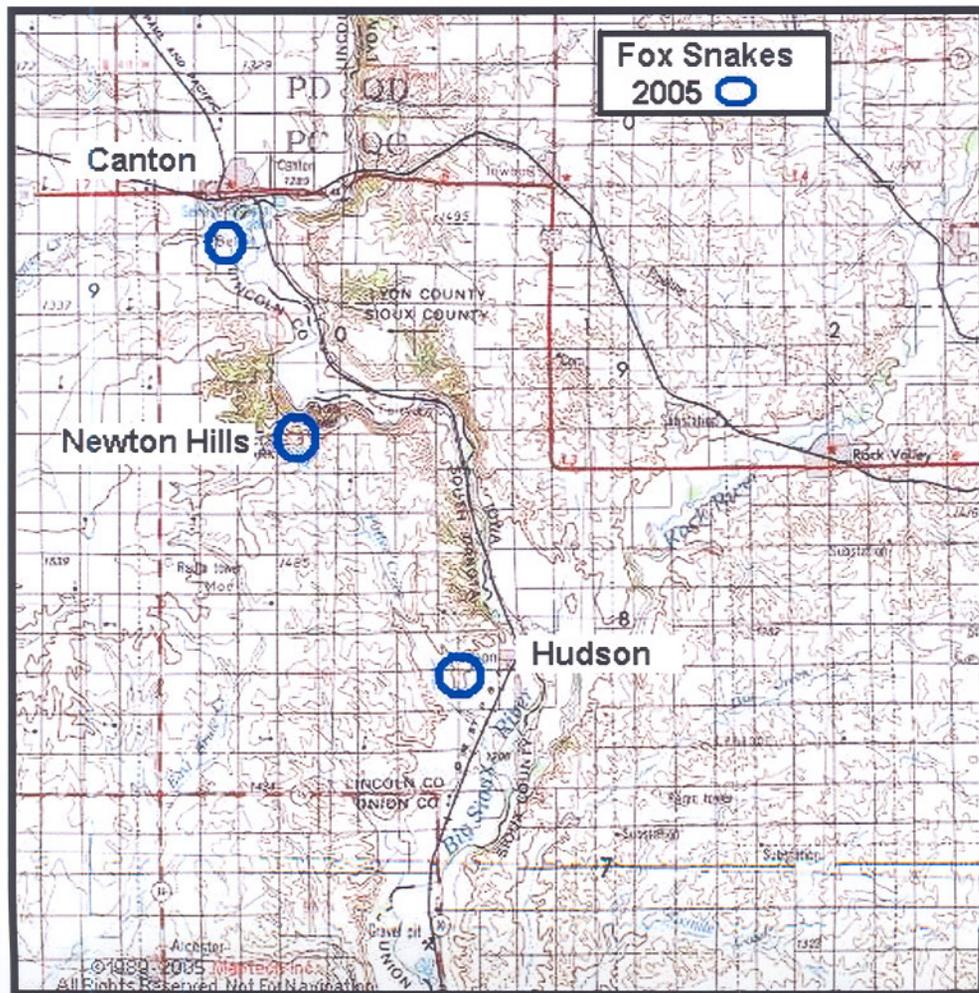
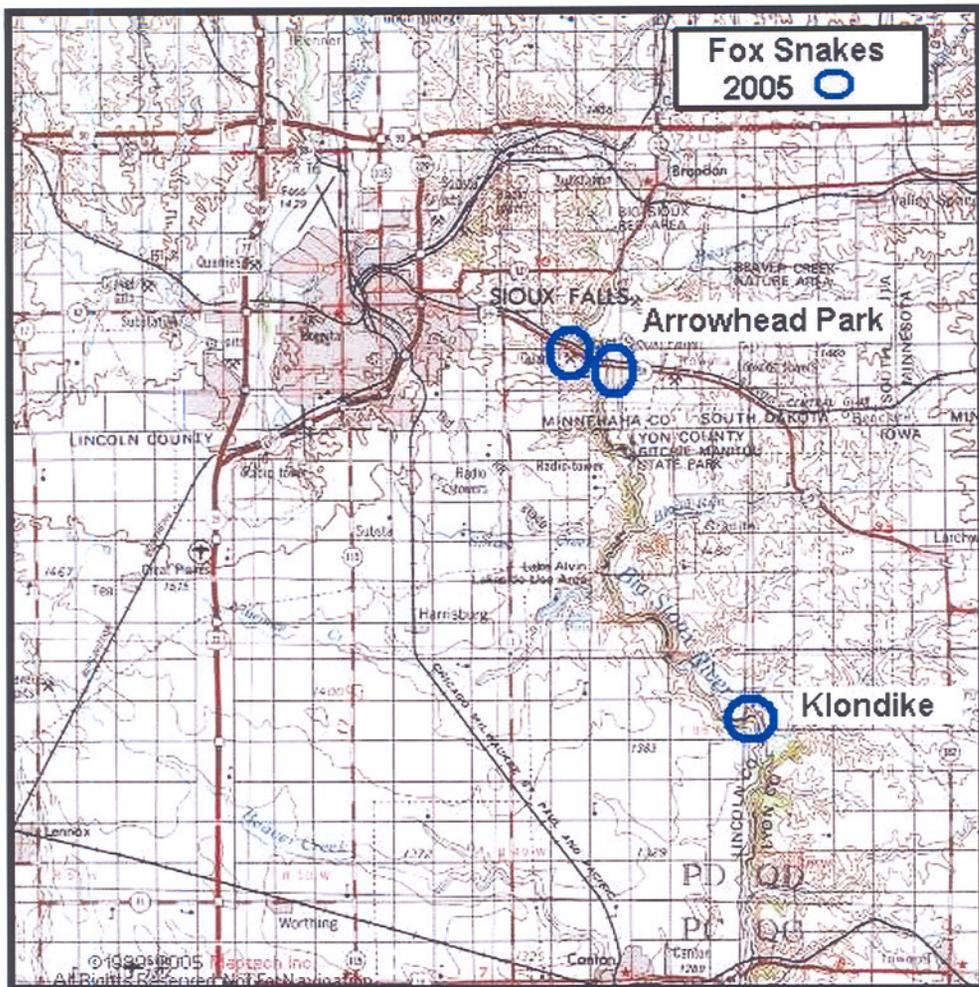


Unfortunately...most of the time these little things are encountered in the wild as road killed specimens. They move about in the spring time during the breeding season, but by far the vast majority that are found are killed on the roads during the fall migration in October.



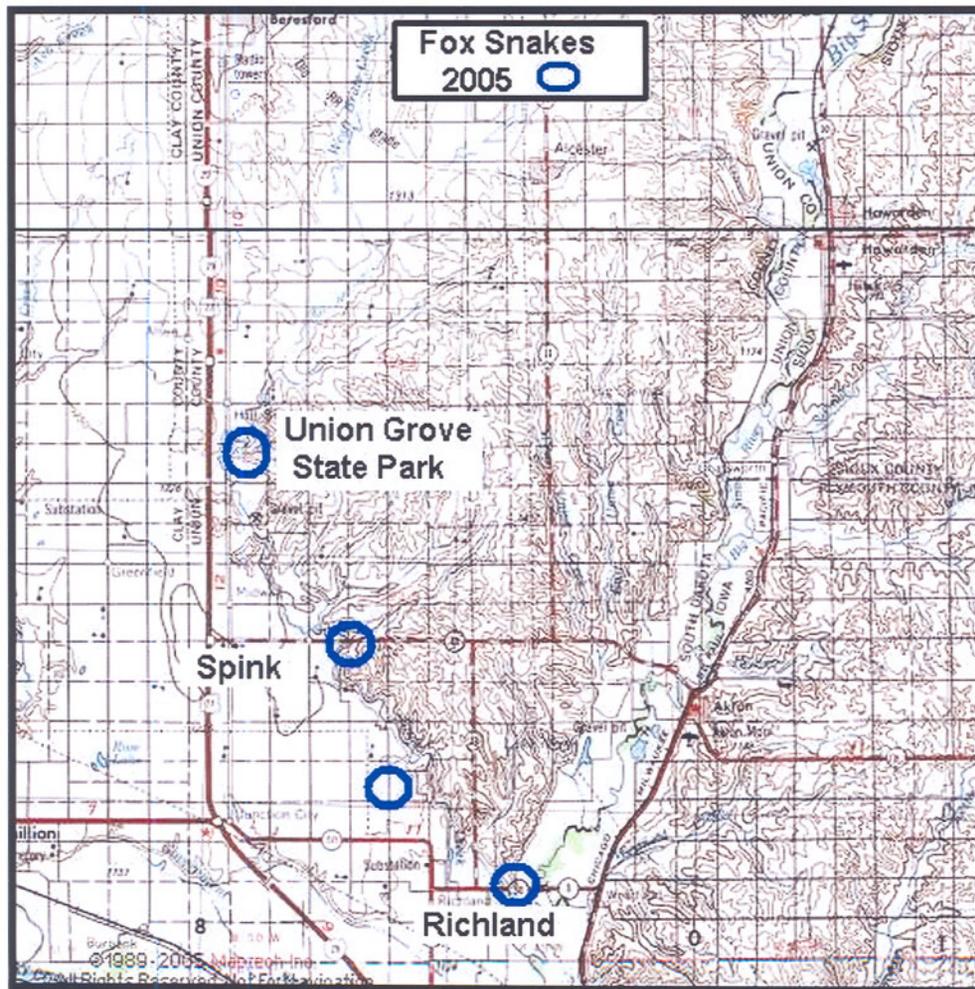
The dorsal coloration of this species varies greatly. Above is an example of a typically colored snake. However...color varieties include black, brown, gold, gray, olive green and even (rarely) light blue.





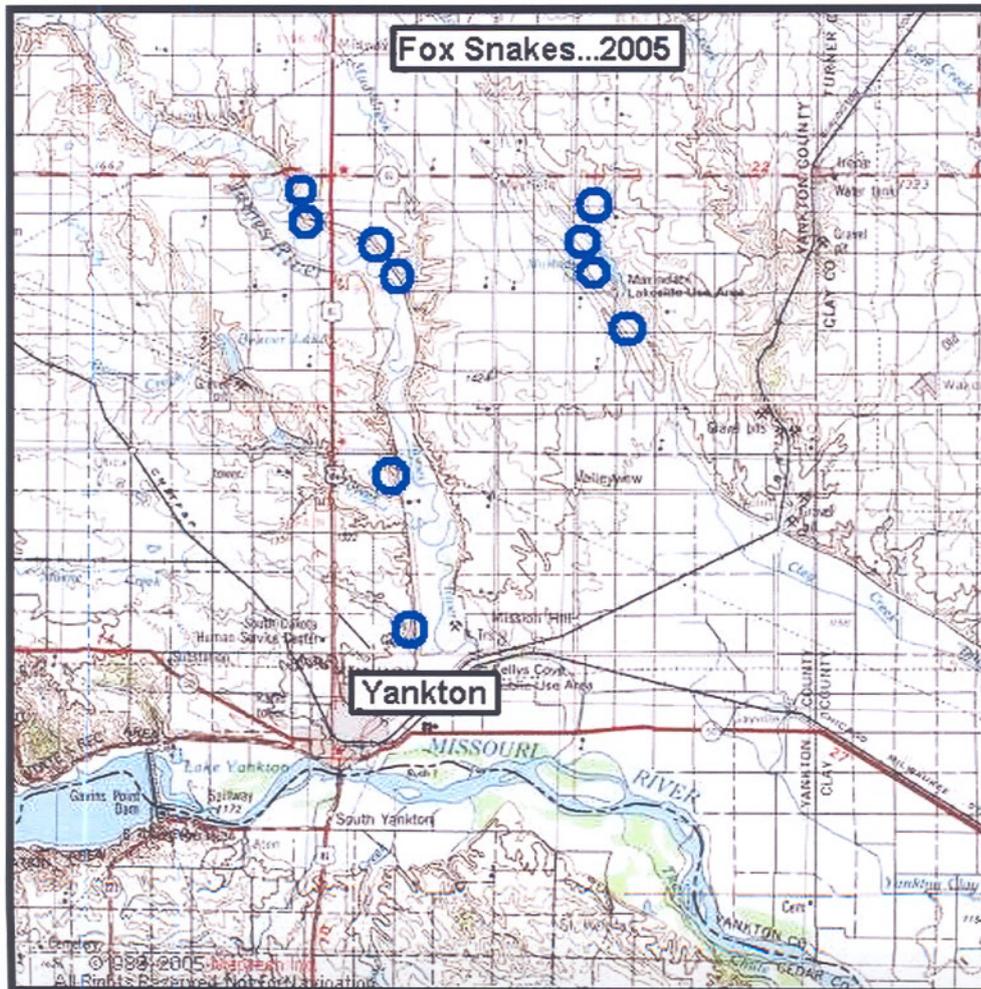
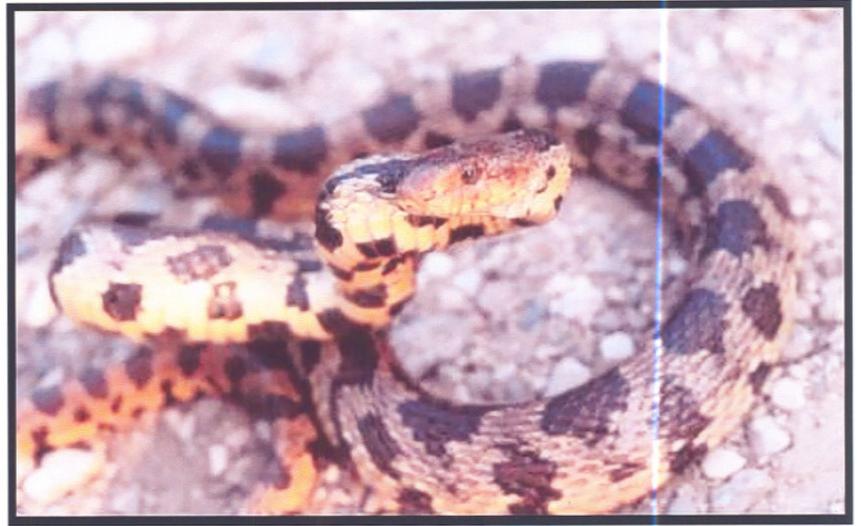


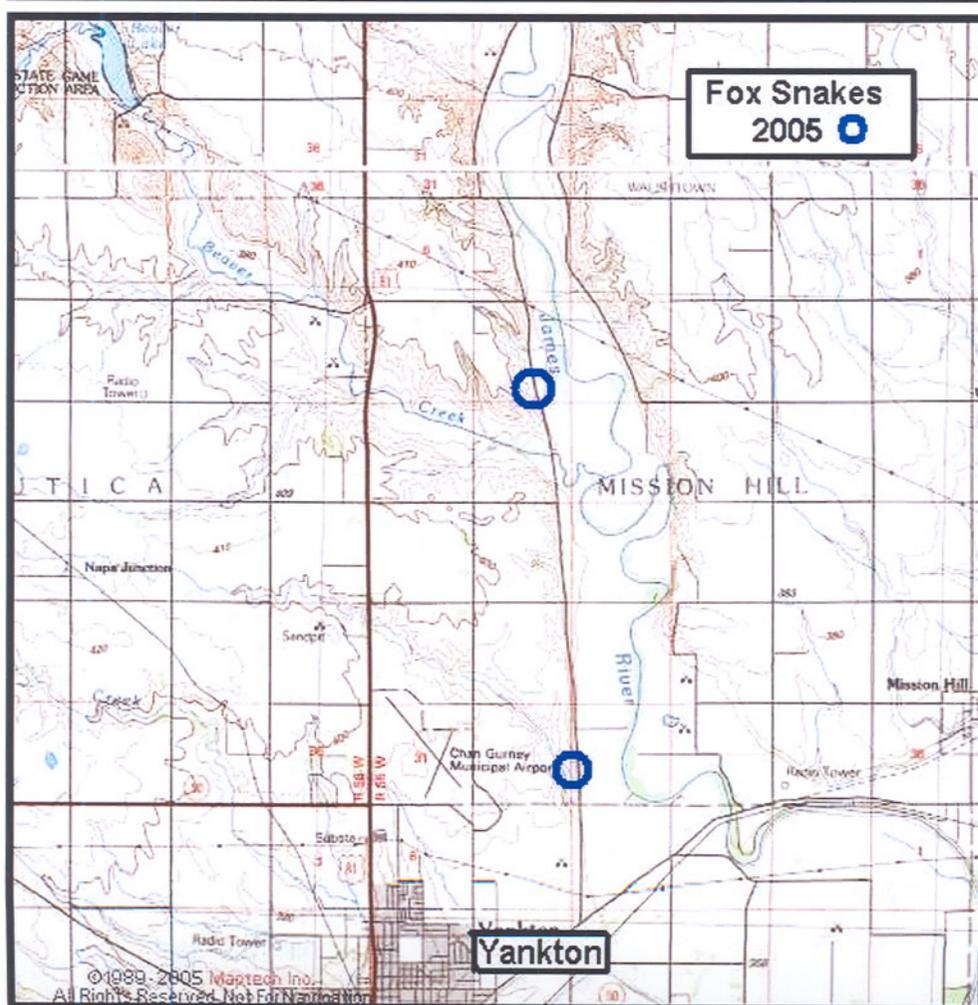
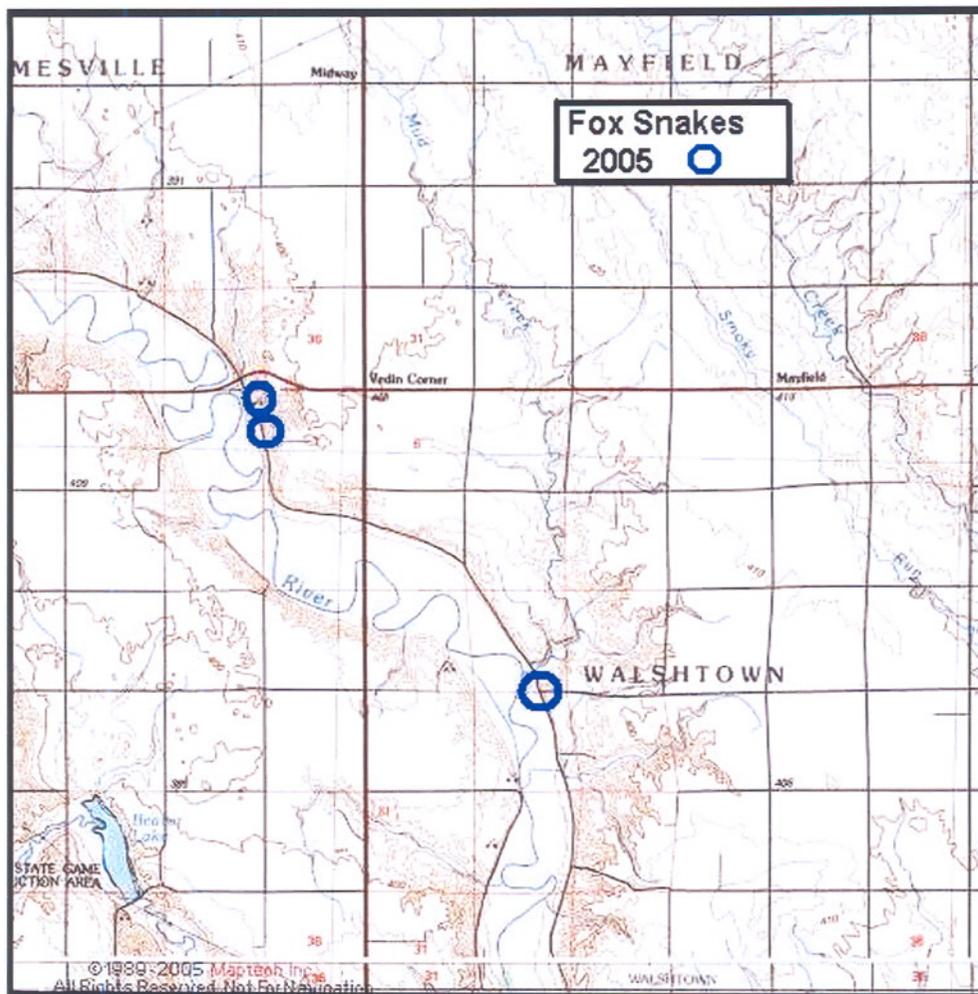
Fox Snakes in Union Co. may be most commonly found at Union Grove State Park or along Brule Creek. They are also fairly abundant along the Big Sioux River Valley. They do venture up and out of the valley itself and may be found up into the surrounding cropland but so far have not been found more than a few miles away from these rolling land forms of the valley and its creek tributaries.

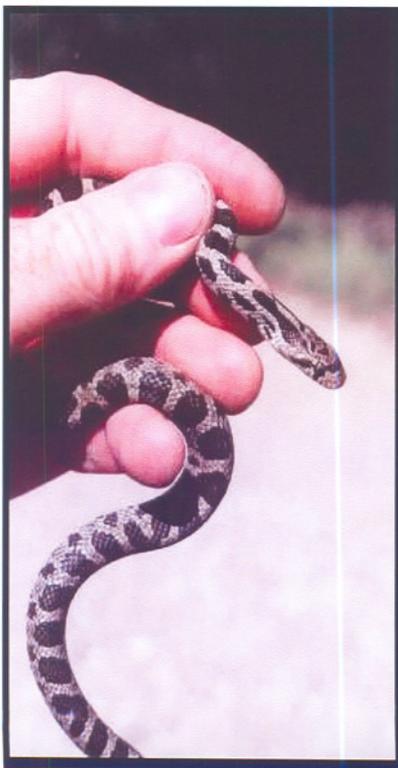
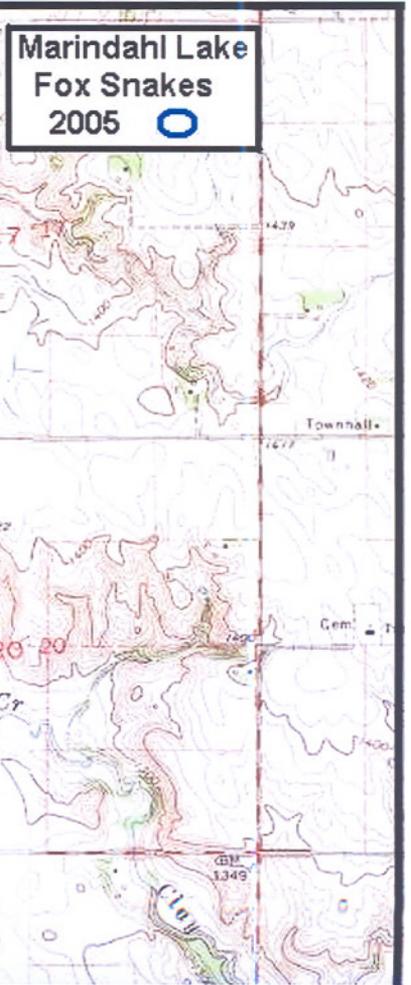
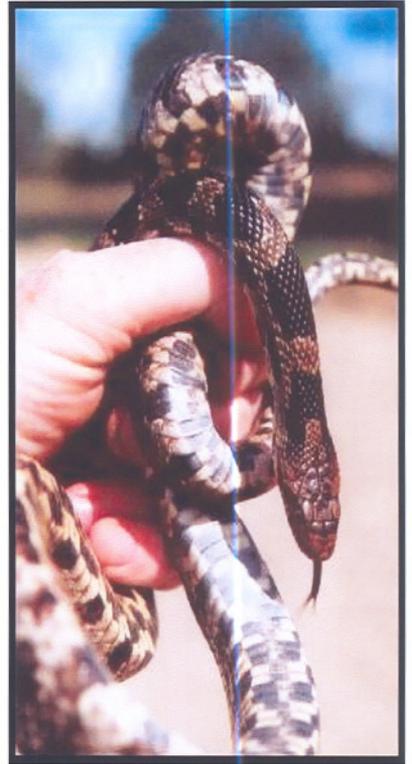
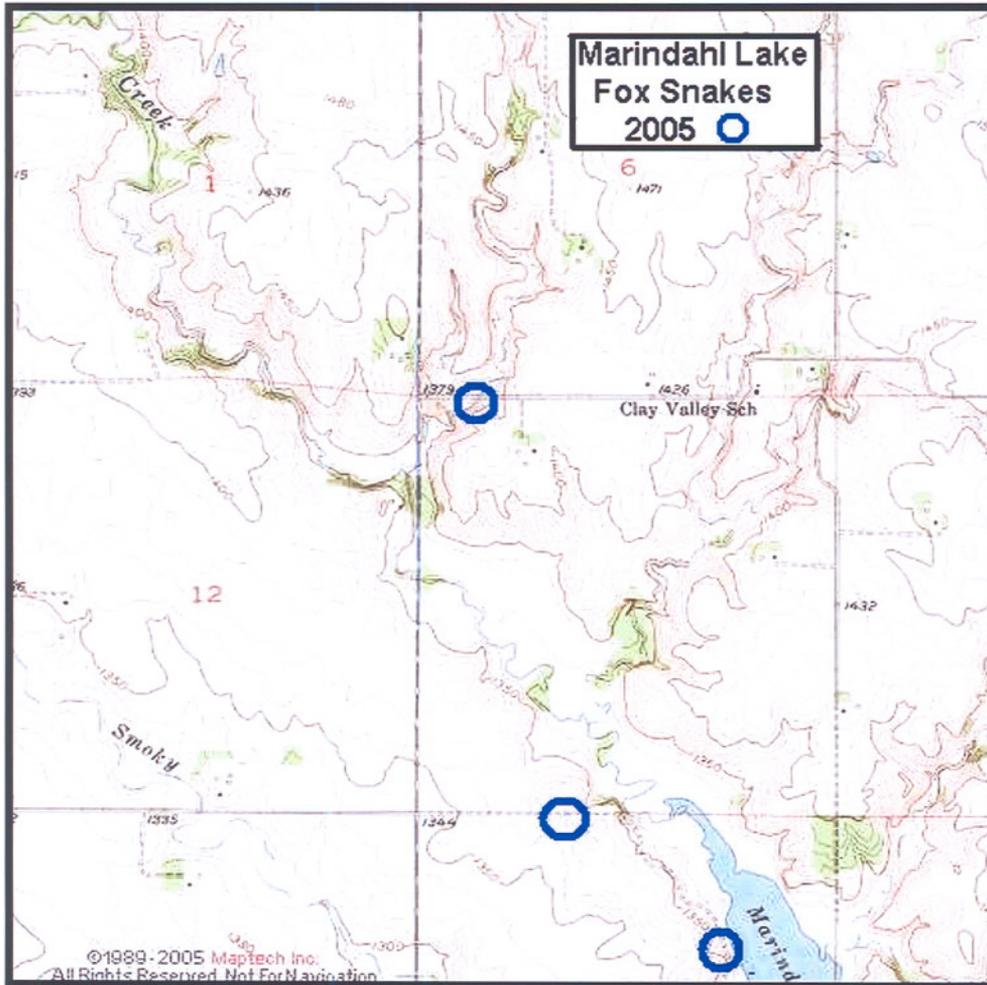




**Fox Snakes of Yankton County:** In 2005... These snakes were found in the James River Valley from Yankton up to hiway 46. Another population was found at Lake Marindahl along the SW edge of Turkey Ridge.



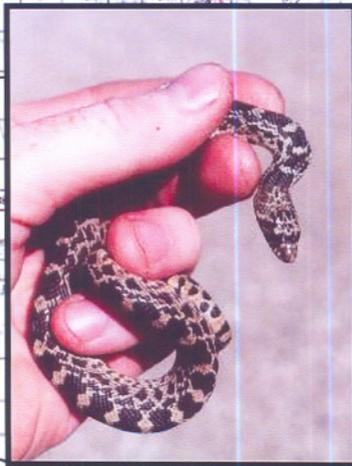
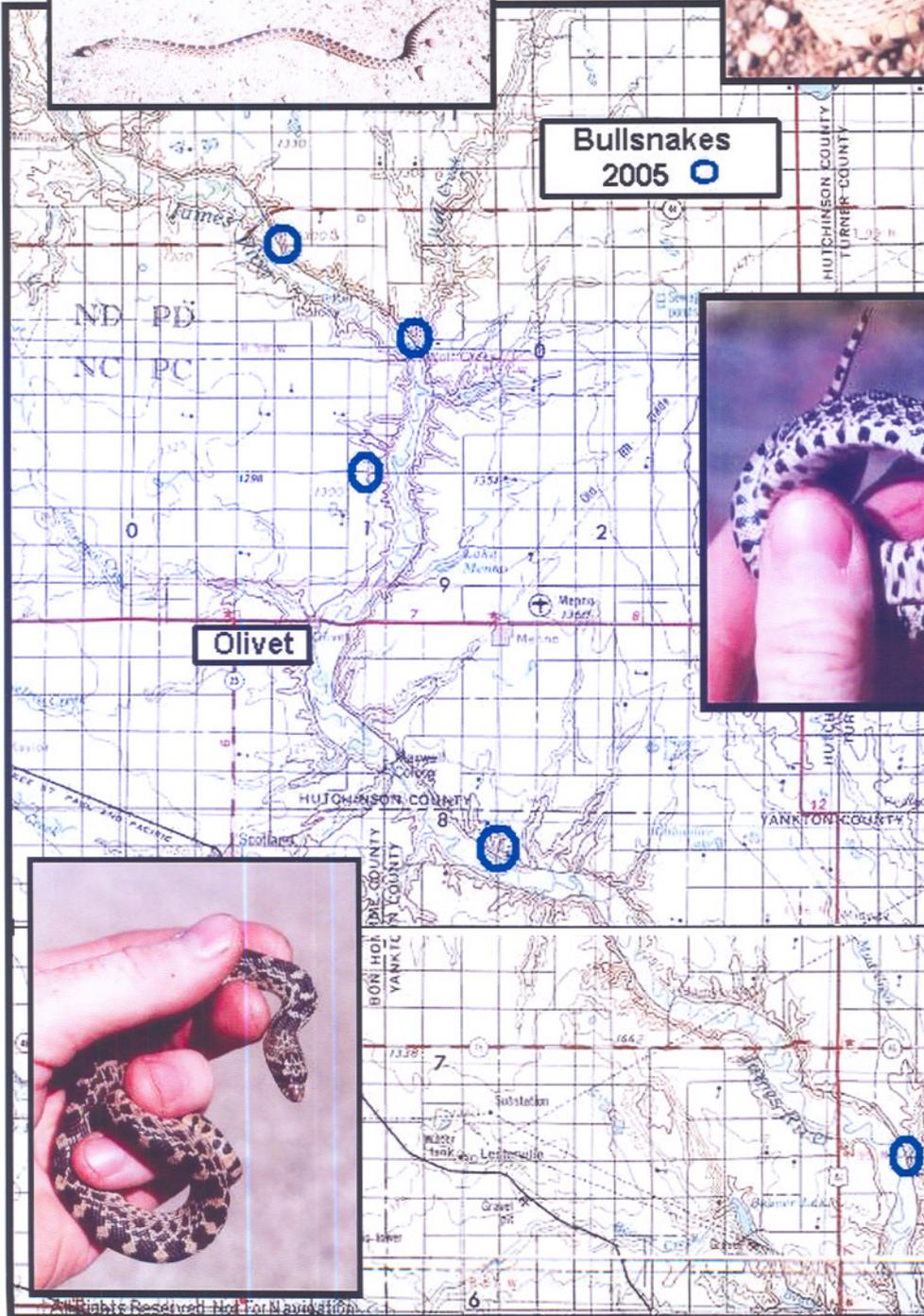


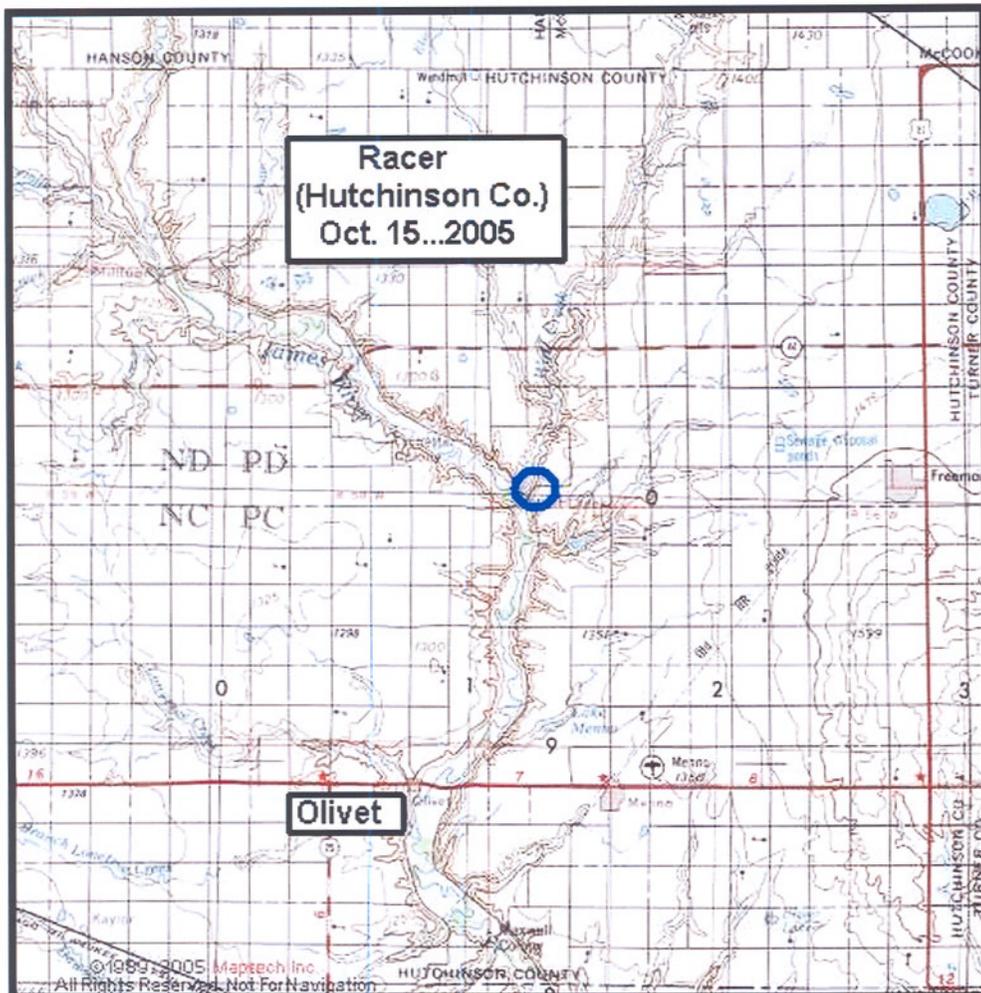


**Bullsnakes:** During 2005...found 5 of them in the James River Valley in Yankton and Hutchinson counties. (2 dead and 3 live ones) One large female was found in May and all the rest were hatchlings found in October during the fall migration.

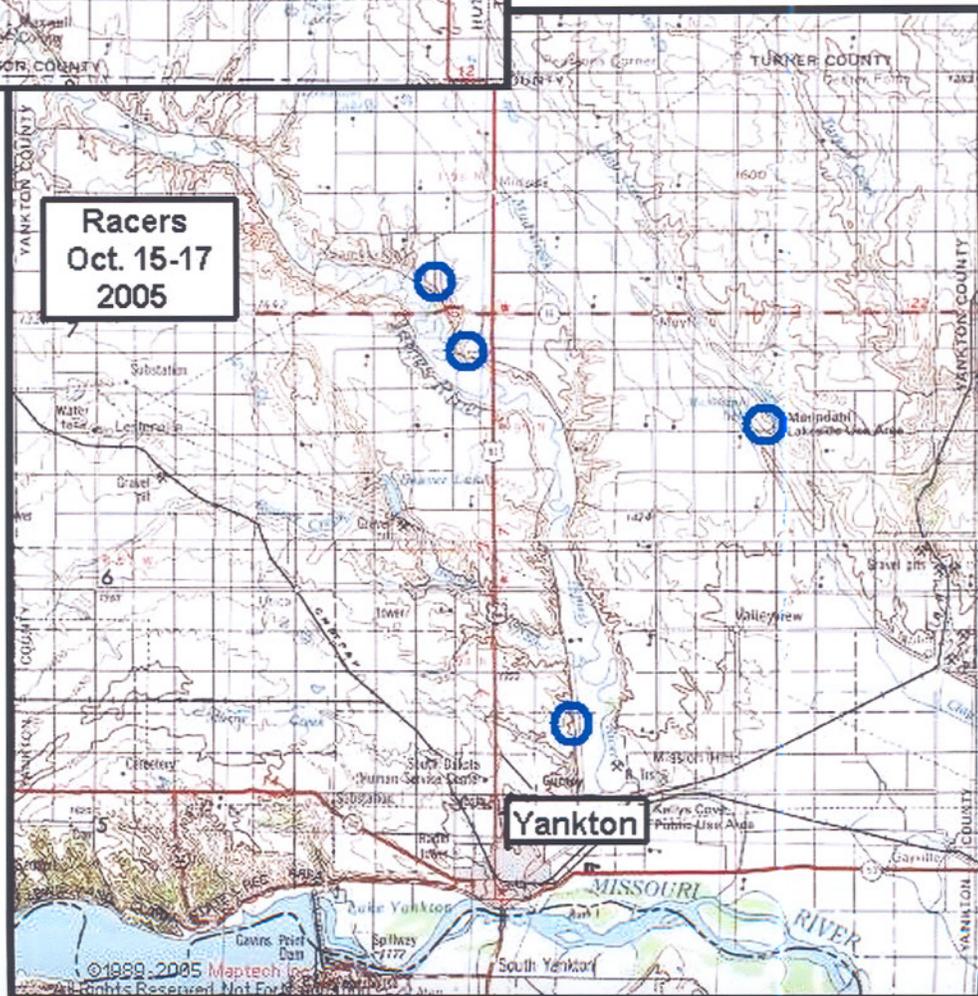


the fall migration.

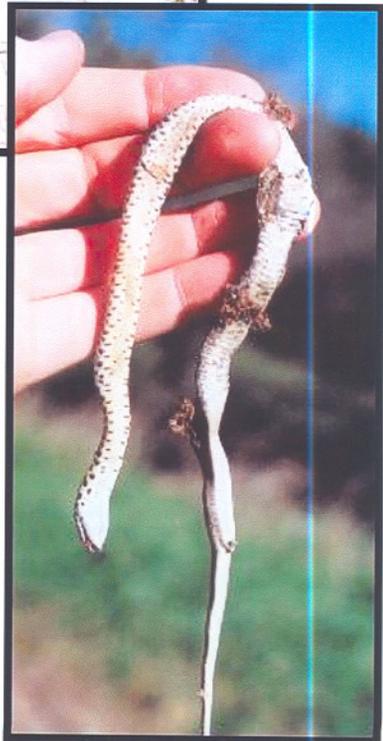
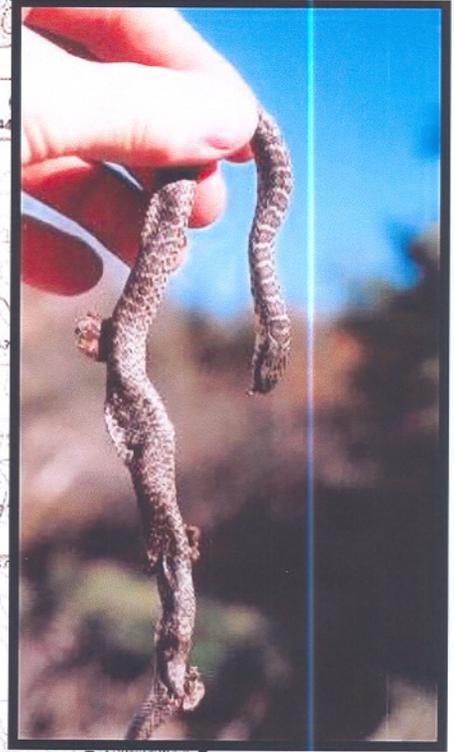




**Racers:** It was a surprise to see these! I knew they were documented along the Missouri River but it was nice to find these in the James Valley. Unfortunately all except one was a road kill. Saw 1 adult, the rest were hatchlings or juveniles all sighted in October.



**Racers** at Lake Marindahl GPA. This was a surprise too. (Always a surprise seeing Racers Anywhere!) Likely looking habitat, though. Only found one dead hatchling on the road. This one may have been a yearling.

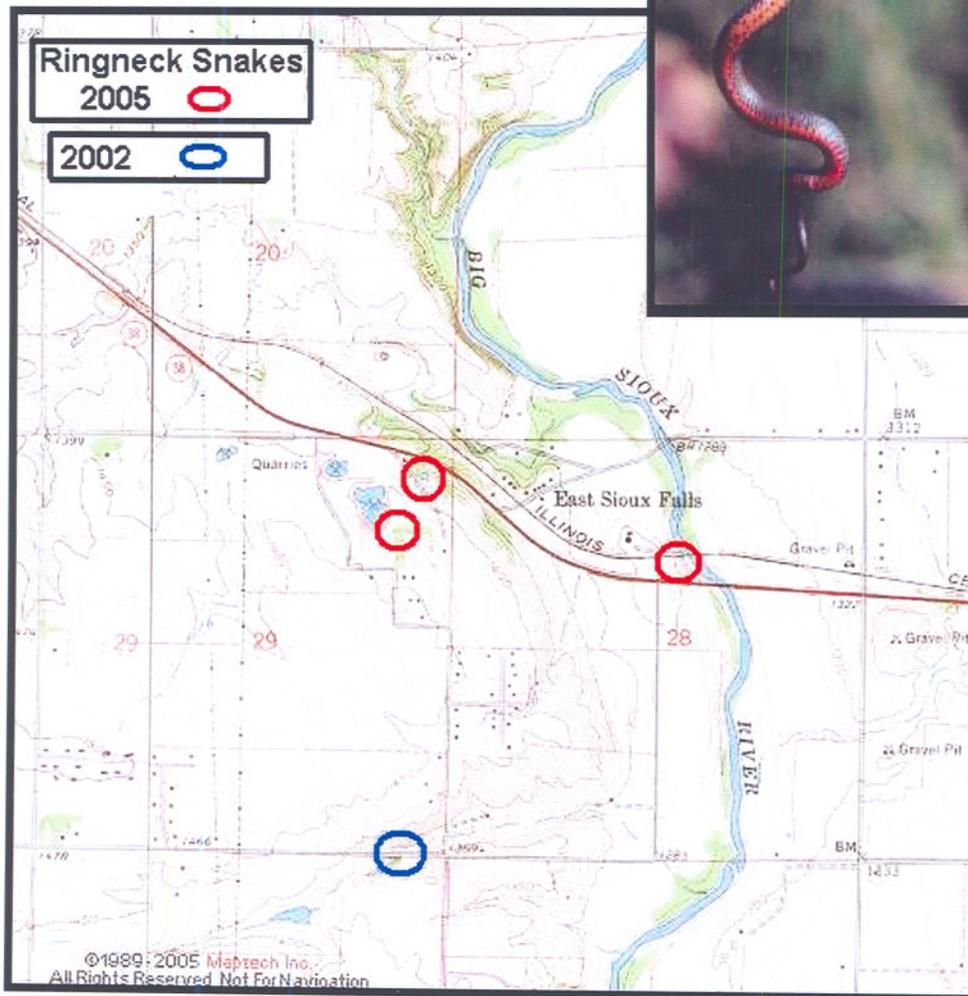
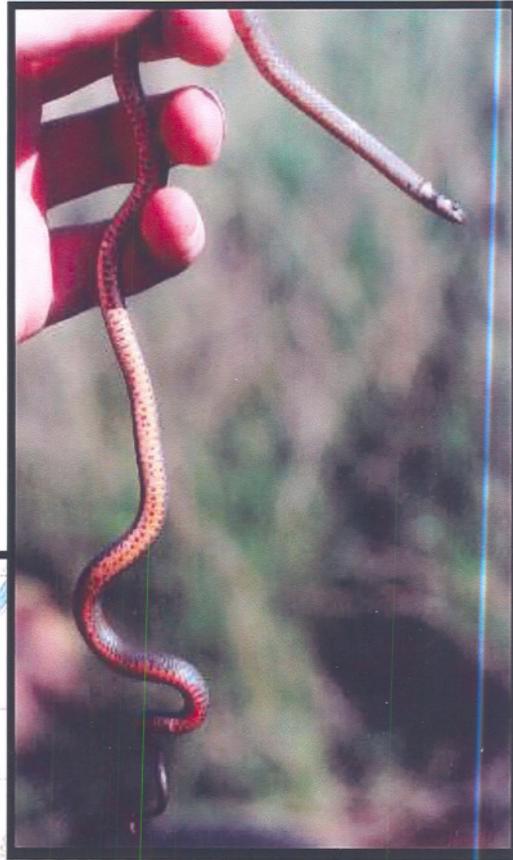


**Racers** in Union County. Biggest surprise of all! Really good to find them here. A dead one was found on the hiway at Richland in 2003. In October on the last day of the survey...2 hatchlings were captured in the hills just

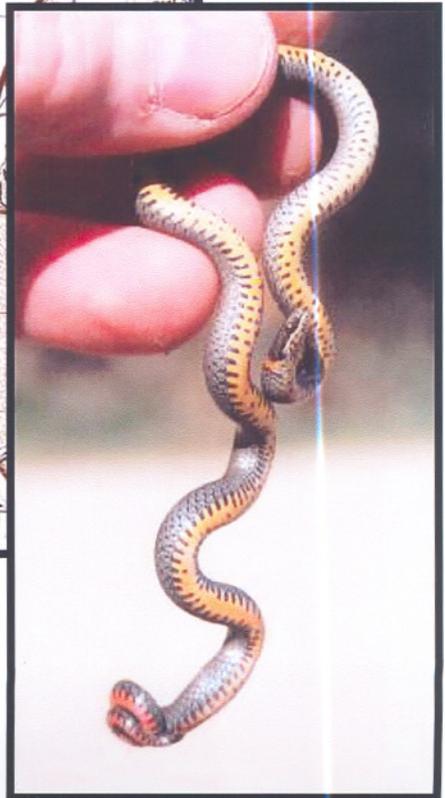
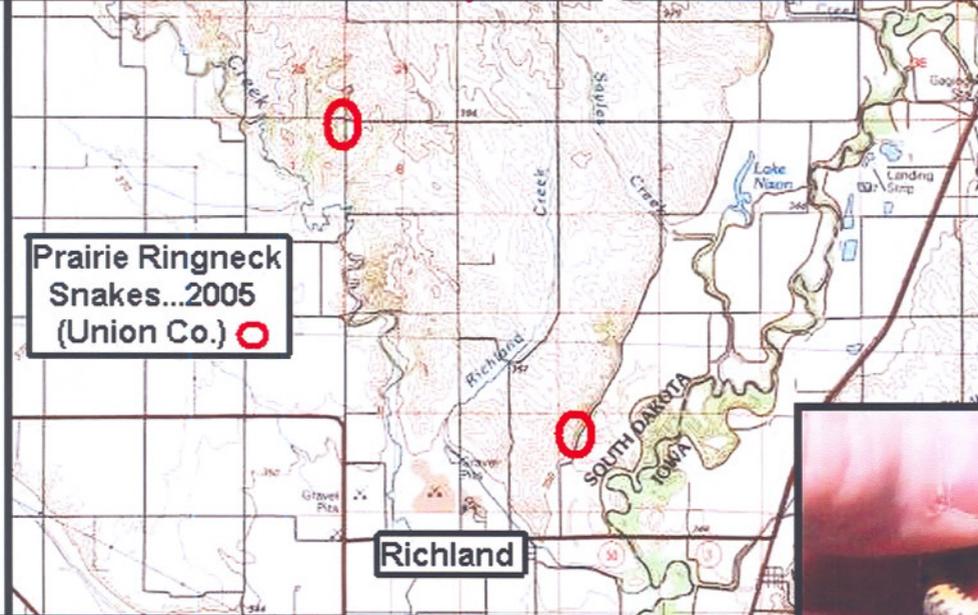
west of the Big Sioux River.



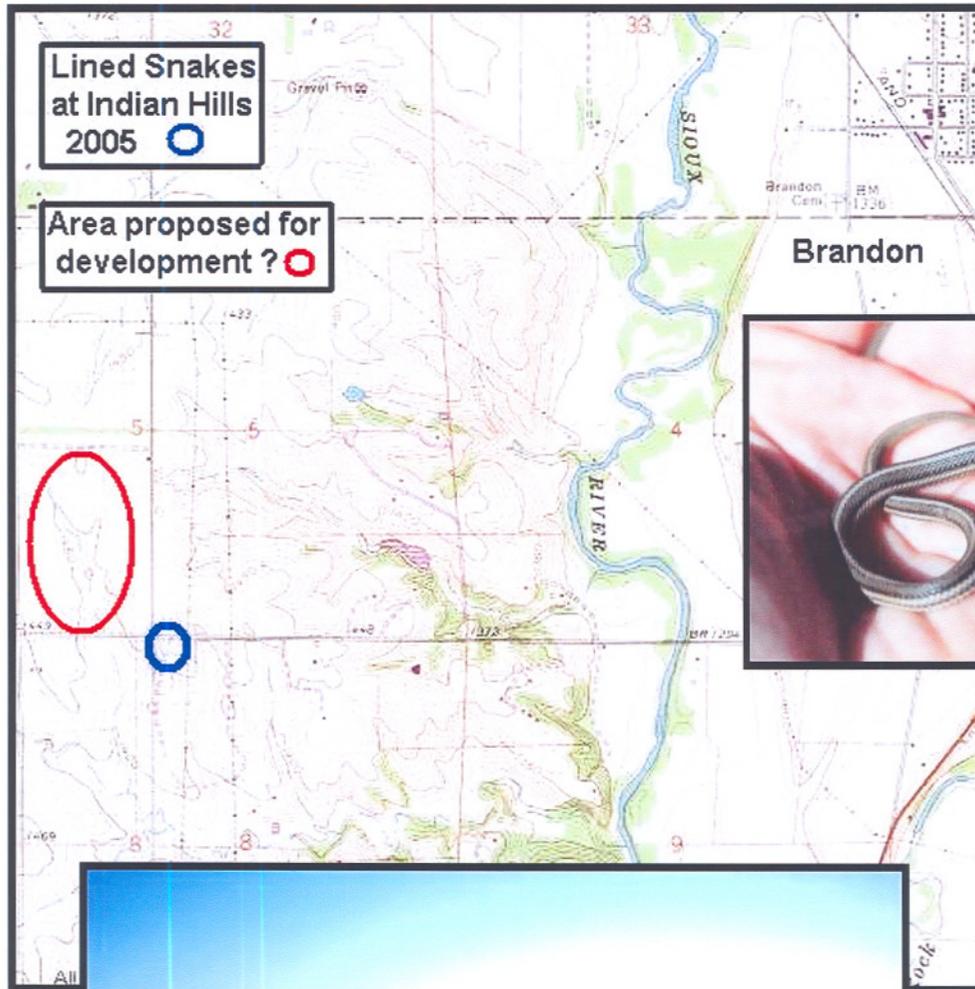
**Prairie Ringneck Snakes:** These small seldom seen snakes were found in the usual places (plus 2 in Union Co.) They were recorded at Pallasades State Park and at East Sioux Falls. The colony at Arrowhead Park has the highest numbers. Up to 2 dozen can be found under rocks in a space of a half hour...and sometimes there are 3 to 5 adults hiding under 1 small rock! This year's record number came to 24 found under one piece of asphalt roofing material at the hiway 42 bridge!!! These populations are all very tightly confined to a few small areas. Identical habitat only a quarter mile away or less will produce no sign of them whatsoever.



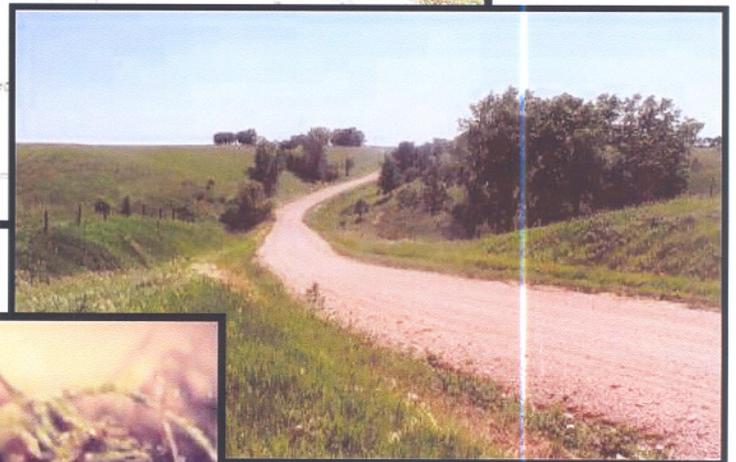
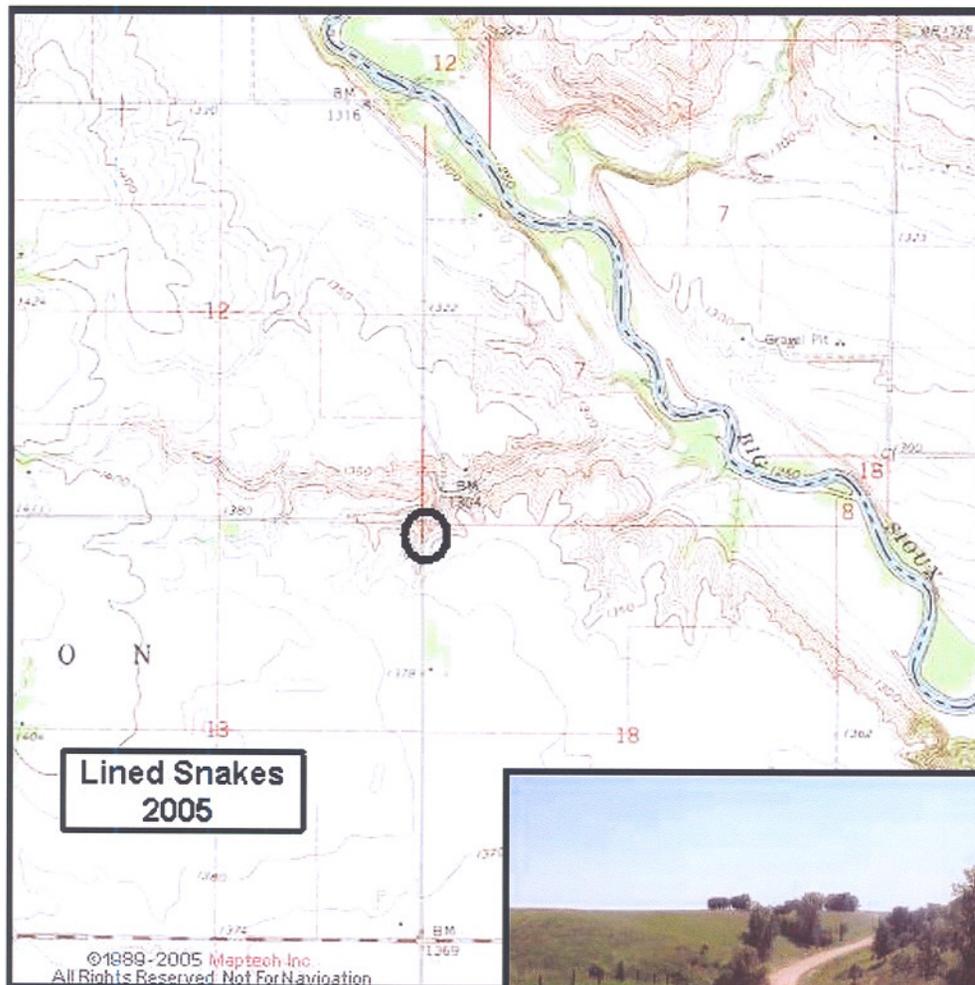
This year **Ringneck Snakes** were found at 2 new locations in Union Co. A single dead specimen was found at the corner of 315 st and 476 ave. (See photos below) And a single live one was found along the river road near the Big Sioux River. (See photos at the bottom)



**Lined Snakes:** Once again...these tiny striped snakes have retained their mysterious status. In October 2005...only a handful of specimens were located at the Indian Hills Estates 3 miles SE of Brandon. Despite several days of perfect conditions and searching...no others were found in this region. Only this small location produced documented specimens in Minnehaha Co. All were found crawling away from 1 suburban yard and ravine at this location. The area in red shows the open cow pasture that may already be rezoned for future housing development.

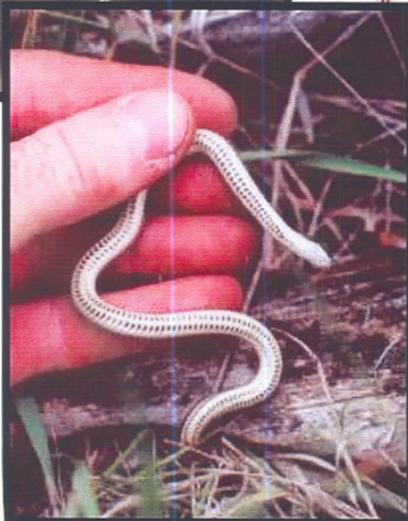
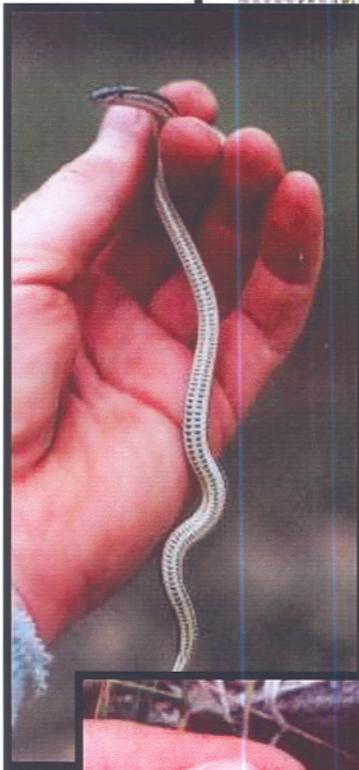
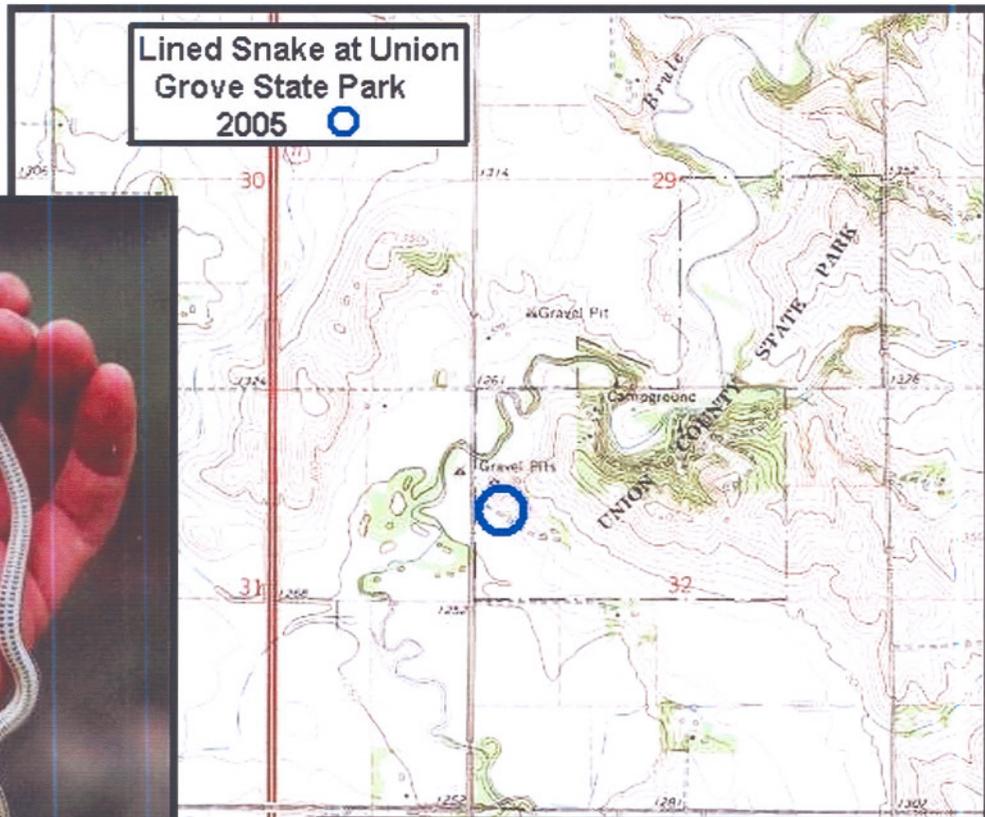


**Lined Snakes** in Lincoln Co. In May and June 2005...a juvenile and adult gravid female were found at this location in a ditch 6 miles north of Canton. The female was taken into captivity where she produced 7 healthy babies in August. All were released again at this same spot in September.

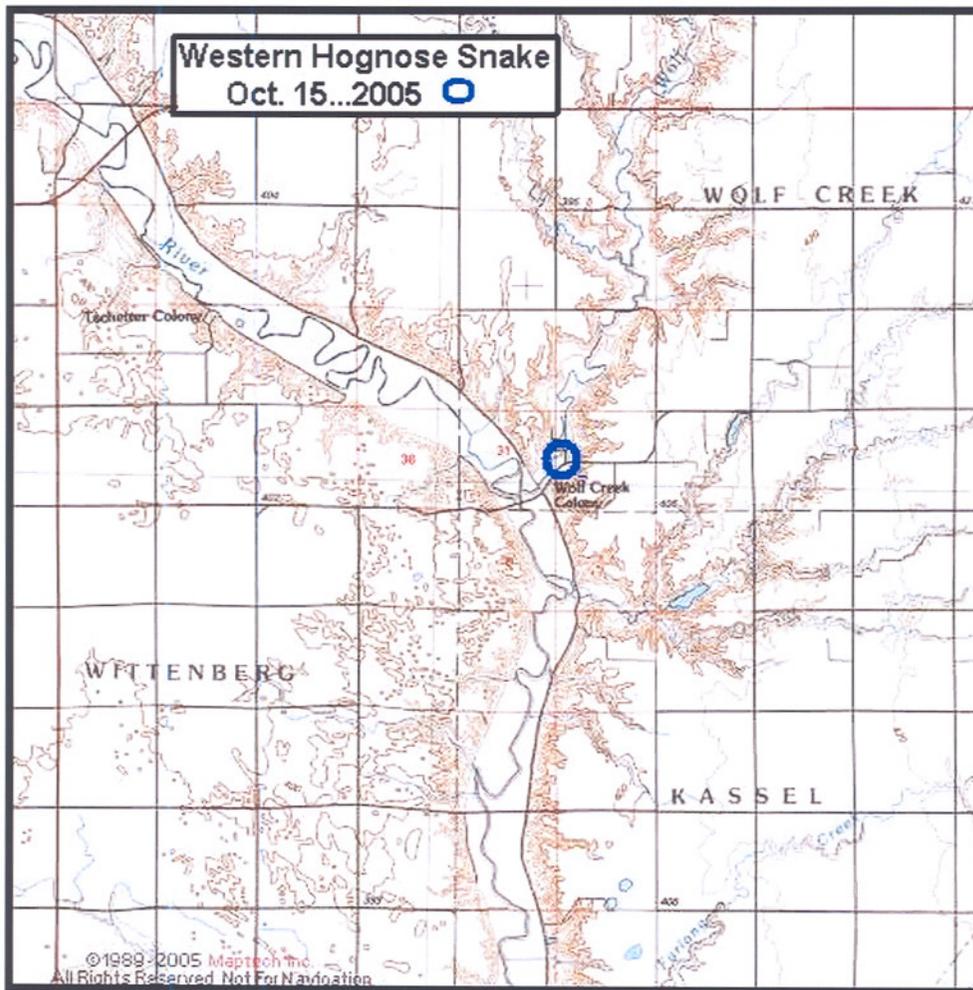




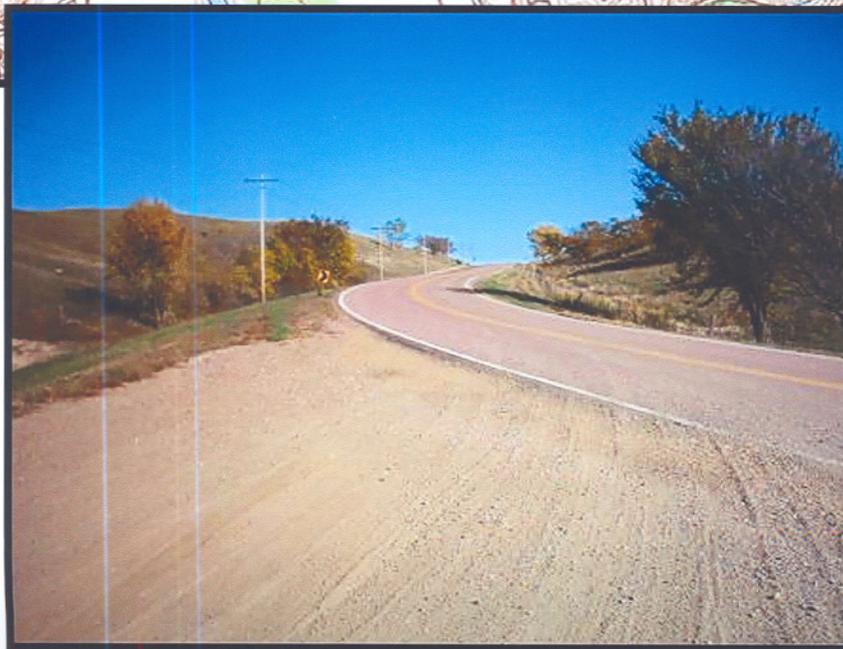
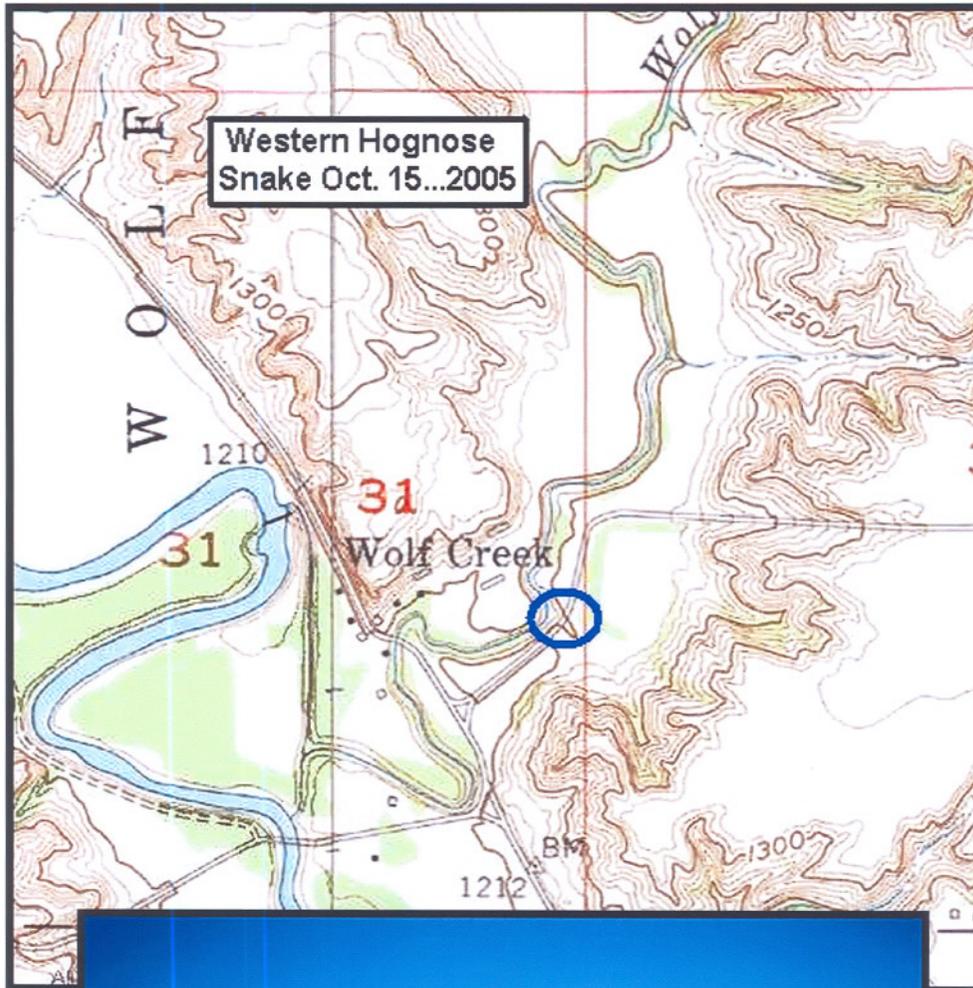
**Lined Snakes** in Union County.  
In May...2 Lined Snakes were found at Union Grove State Park. One was photographed...the other one escaped. Both were found on separate occasions at the exact same spot under a small piece of wood in the park trash pile.



**Western Hognose Snake:** The first one I've ever seen in South Dakota! These snakes are probably a lot more plentiful than one might think where suitable habitat exists. (Despite the fact that they are seldom seen) It is reported that they spend most of their lives underground or at least partially buried in loose, sandy soil. The only problem is...the only way to find one of these is to get incredibly lucky and nearly stumble over one or find one dead on the road...which in itself is unusual. Such was the case here. The specimen found at this location was a badly flattened road-kill about 20 inches long. (It was collected and preserved in alcohol)



Here is a closer detail of the map and a shot of the landscape along Wolf Creek in Hutchinson County. This location is just across the road from the Wolf Creek Hutterite Colony. I'm sure the members of this society would be most helpful in reporting sightings of these rarely seen snakes except for the fact that the Hutterites themselves are sometimes more elusive and harder to find than Hognose Snakes!



Concerning the Snake species that were Not found in 2005: The lack of Smooth Green Snakes was disappointing. There are apparently previous records of them for the SE counties. However...none were found...living or dead. Last years specimens recorded in the NE counties had my hopes up that I would find them here, too but none turned up.

The Red Milk Snake was one species that I really hoped I would find this year...but none were located. These, too are seldom seen snakes even in areas where they are fairly common. Even just across the border in North Western Iowa...Jeff LeClere states that very few have ever been found and in some recorded localities it has been a long time since any have been recently documented.

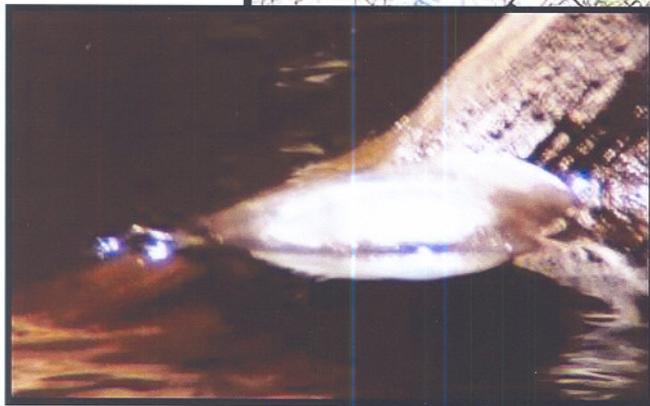
The Eastern Hognose Snake. These, too, like the Western variety spend a lot of time buried in loose sandy soil. But these snakes do move around on the surface more then their western cousins. These have been documented along the Missouri River and near the mouth of the Big Sioux. Because I didn't get down into their range I didn't see any. There is more likely habitat in the James River Valley than in the Big Sioux so it's quite possible that they may exist away from the Missouri lowlands.

Water Snake: These snakes have apparently only been recorded along the Missouri River near Springfield and because my wanderings took me only as far west as the James River I was not within range of this species.

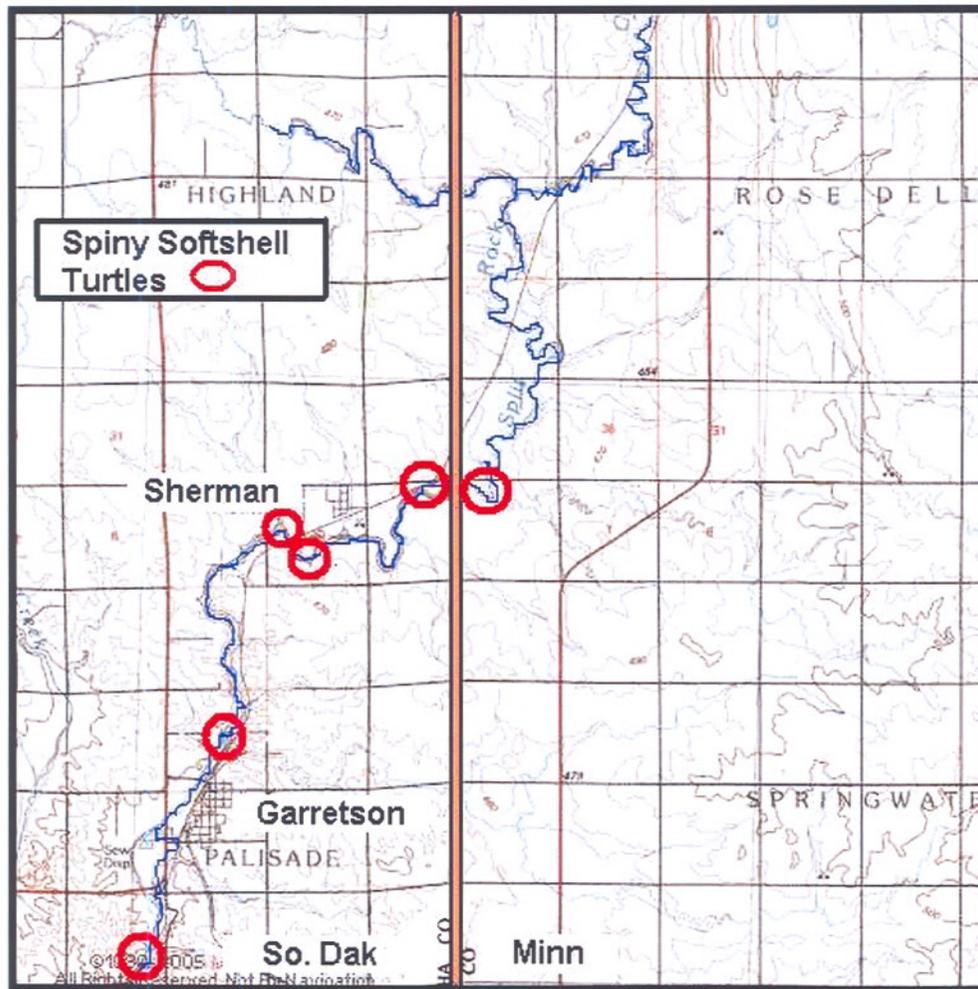
Brown Snake: Continued efforts were made to locate this species along Big Stone Lake where a single specimen was recorded in the 1920's. Needless to say...none were found. Jeff Nodsle of Hartford Beach State Park is watching out for them. I've heard no positive reports from him so I must assume that this species was either mis-recorded or no longer exists in the state.

Black Hills Redbelly, Wandering Garter Snake and Prairie Rattlesnake: These 3 species have not been recorded east of the Missouri River. The Prairie Rattlesnake still exists in NW Iowa...along the Missouri River (mostly west of Yankton)...and reports of introduced specimens along the Big Sioux River have yielded no known established populations.

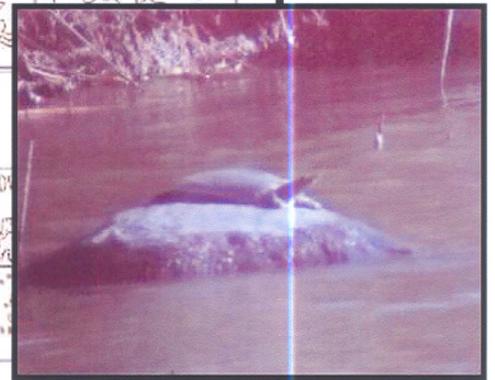
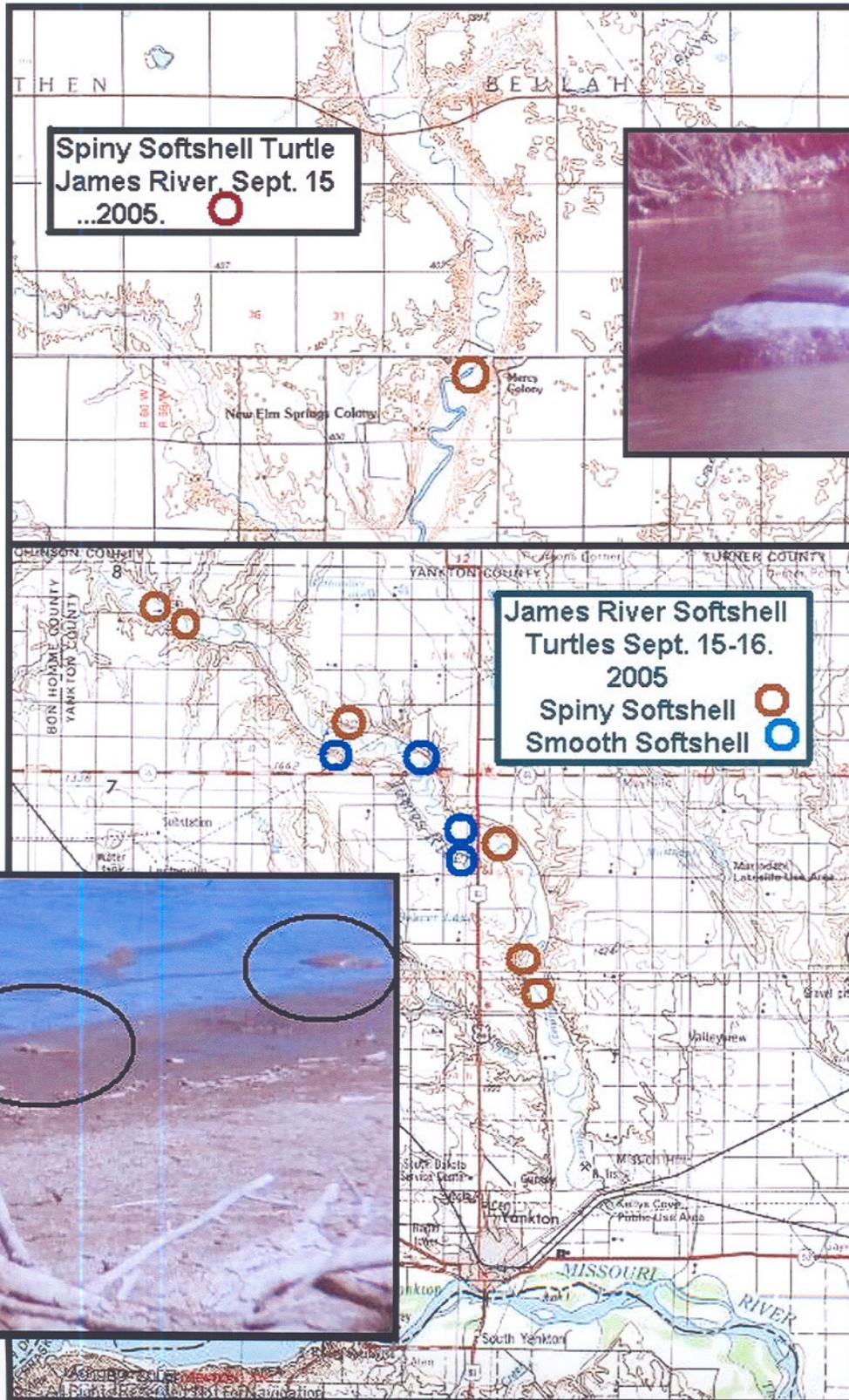
**Softshell Turtles:** One **Spiny Softshell Turtle** was located in the North Fork Whetstone River just 1 mile north across the Roberts County line in June. Frequent heavy rains provided enough water in this small river to allow a single adult specimen to be recorded sunning on a fallen tree branch below the bridge on 141 st.



**Spiny Softshell Turtles** in Minnehaha County: Once again... Spiny Softshells were observed basking on quartzite boulders in Split Rock Creek right up to (and across) the state line. And also all the way down the Big Sioux River, too...but because the water level was high all summer very few were actually observed.



**Softshell Turtles** in the James River: Some late season turtle scanning produced Spiny Softshells and Smooth Softshell Turtles in the lower James Valley. A total of 11 **Smooth Softshells** were observed over 2 days in 4 separate locations. And, of course, the photos of them turned out poorly.



Turtles that were Not observed in 2005:

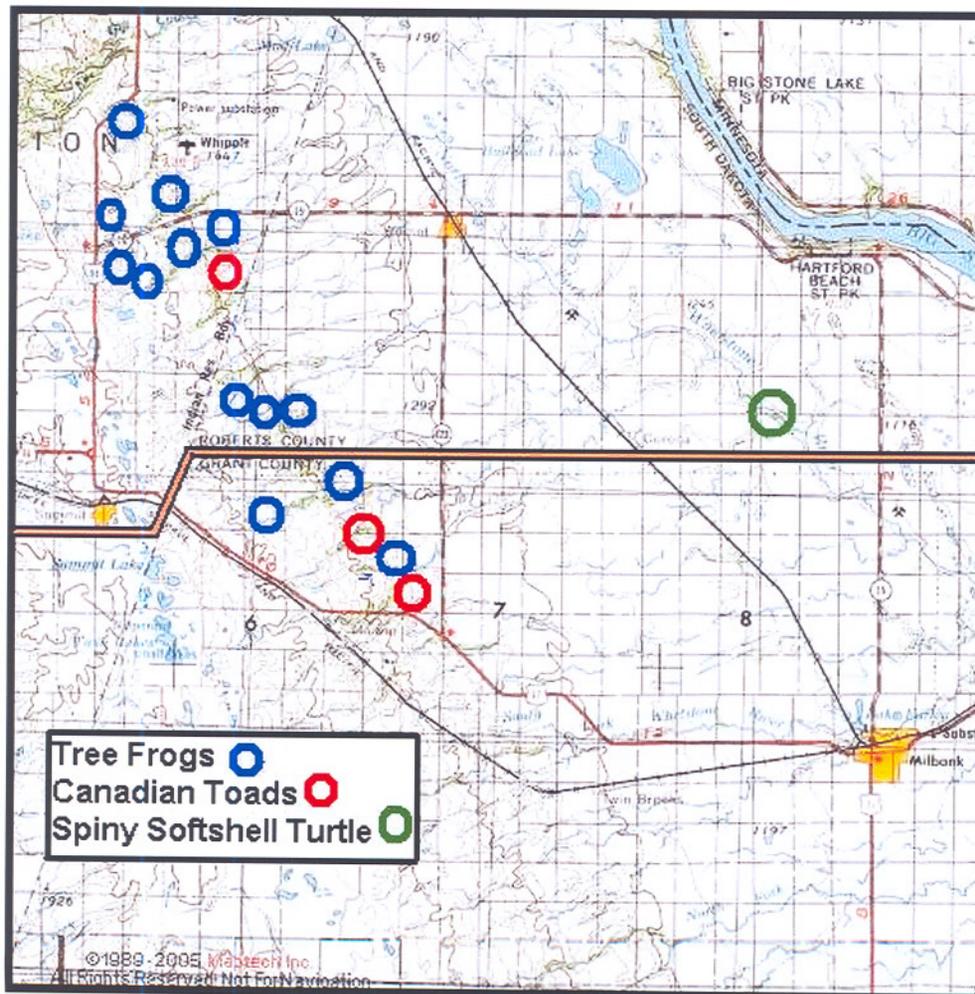
Blandings Turtle. None were found in the area of Flandreau Creek in Moody Co. or in the creeks and wetlands of the prairie highlands. In August (?) A Blandings Turtle was apparently found walking along I-29 in the very NE corner of the state (Roberts Co.) by a Minnesota State mammal biologist but it is generally assumed that it was a captured and released specimen. (No more details have since been provided) However... This region does have abundant typical likely habitat for these turtles and should be continued to be investigated for isolated populations. Efforts to contact local residents who might know of their existence in the area will continue.

False Map Turtle: None were observed in the Big Sioux or James River in 2005.

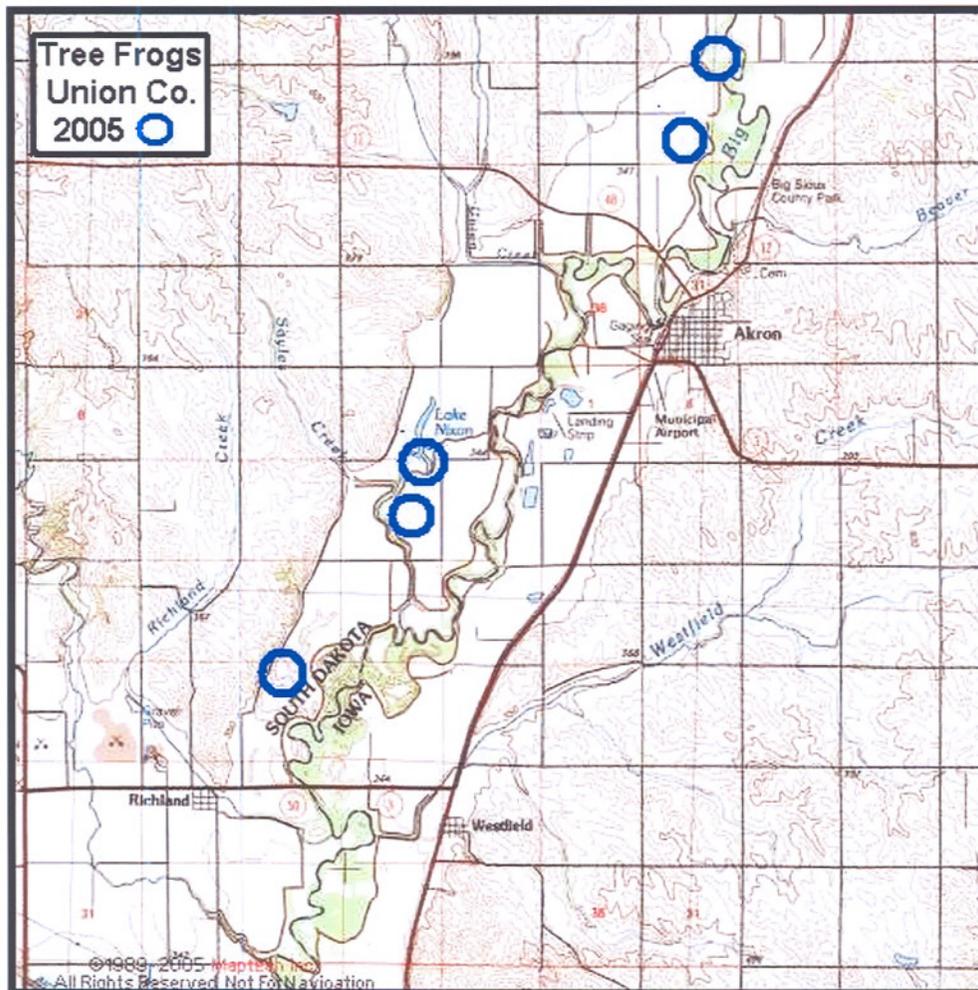
Box Turtle: These turtles have not been recorded in the south east counties. There is a possibility of old reports from the Big Sioux Valley but very little likely habitat still exists there. The James River Valley has more likely looking habitat to support some small populations but none have yet been recorded in that region.

## Amphibian Survey 2005

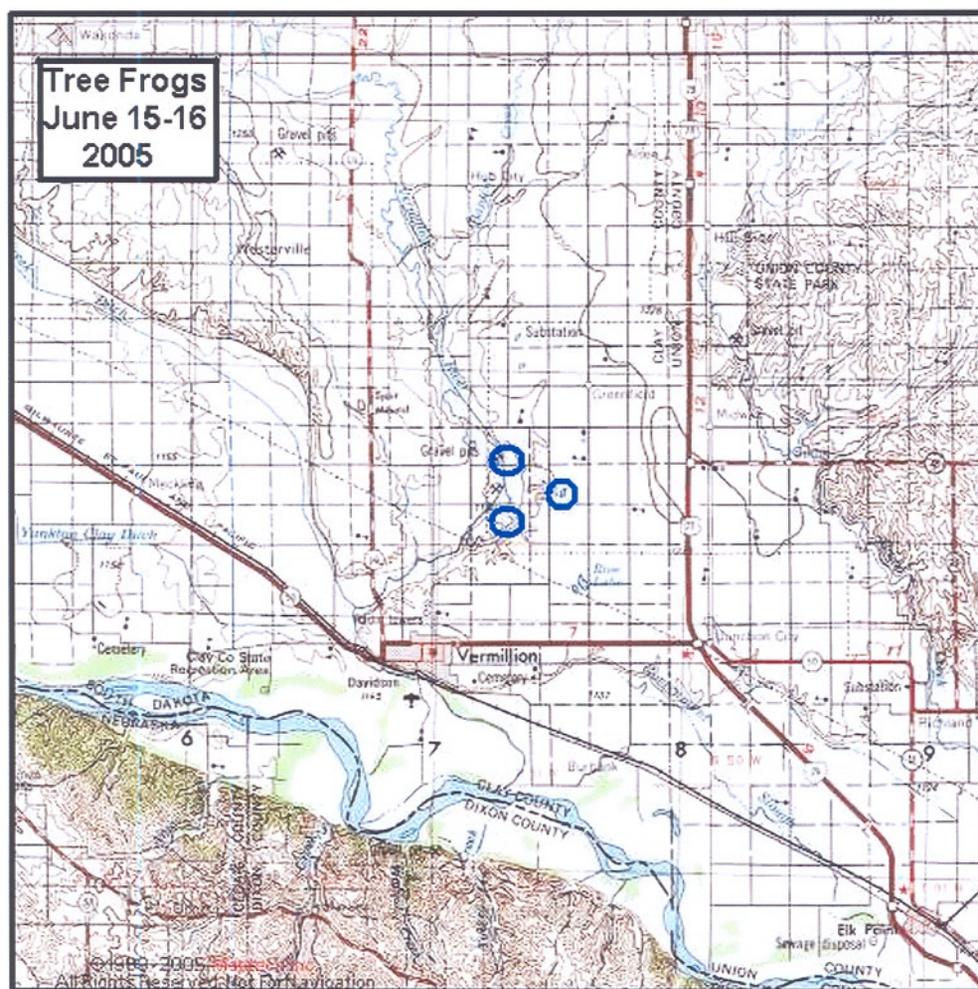
**Tree Frogs:** A new county record was added this year. Tree Frogs were heard calling from 3 separate locations in Grant County in June. Last year the search ended near the intersection of Hiway 19 and I-29. This year I picked up the trail again along the edge of the prairie highlands and followed their calls down into Grant Co. to within 12 miles NW of Milbank. Despite the fact that possible scattered likely habitat exists all the way down along this ridge to Gary, SD...none were heard calling from this point on down. I believe that most of these were **Copes Gray Tree Frogs** because of their sharp, rasping sound and the fact that nearly all of them were breeding in pools some distance from groves of trees out onto the prairie pothole wetlands. Only one example fit the description of the **Eastern Gray Tree Frog** and that was a single individual calling from up in a tree near a pond in Big Coulee near Spring Grove in Roberts Co. **American Toads...Plains Toads...and Canadian Toads** were heard, too.



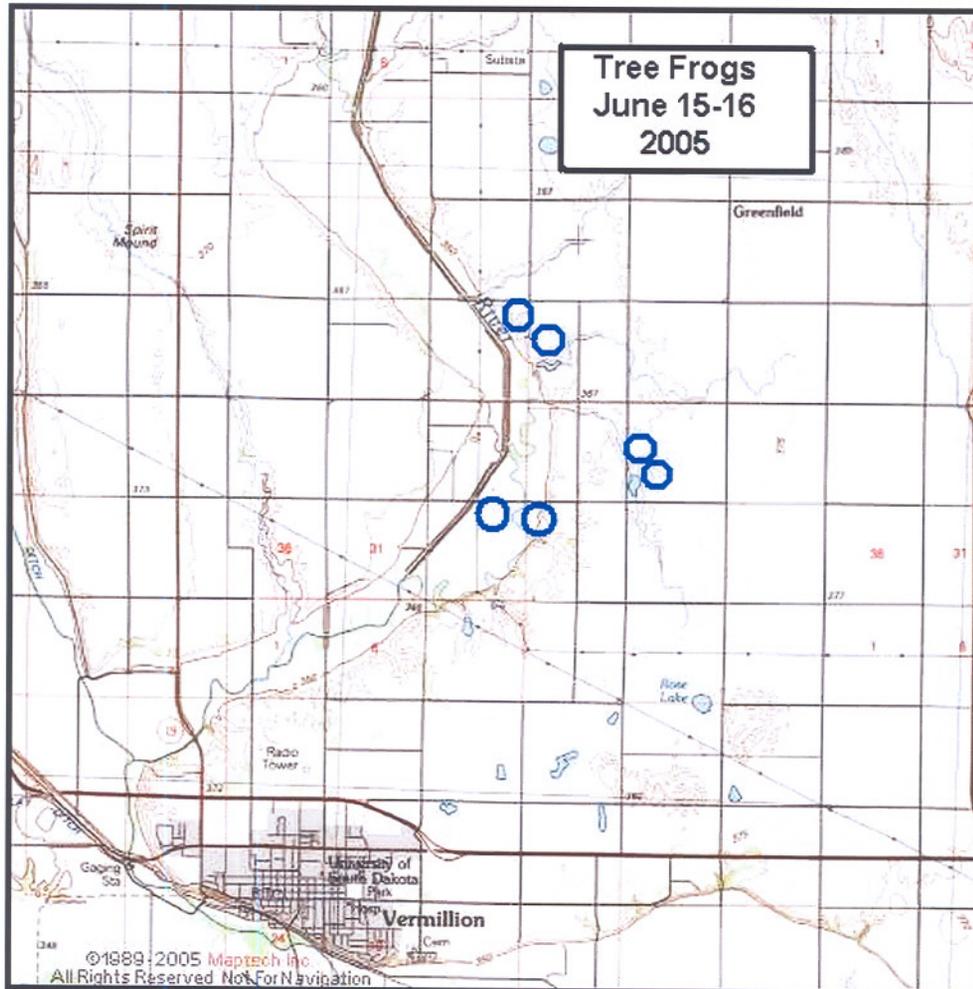
**Tree Frogs in Union County:** On the night of June 14/15 Tree Frogs were heard calling from 5 separate locations along the lower Big Sioux River. These were all heard calling from up in the trees but the calls seemed to be the same as Copes Gray Tree Frogs...rather harsh and not as a melodic trill that is commonly attributed to the Eastern Gray Tree Frog.



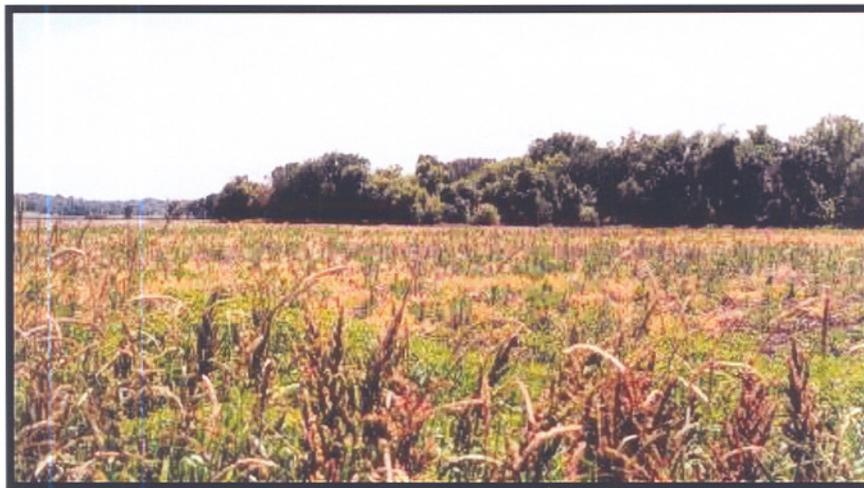
**Tree Frogs** in Clay County: On the night of June 15/16... Tree Frogs were heard calling from only 3 separate locations NE of Vermillion. Two came from along the edge of the flooded Vermillion River. The other came from a flooded field a mile to the east. These all called from up in the trees and this time they were more of a melodic "bird like" trill like an Eastern Gray.



Here is a more detailed map of the **Tree Frogs** of Clay County:  
The main channel of the Vermillion River has been diverted as part of an attempted flood control project and most of the Tree Frogs were heard calling from the old flooded river channel to the east. (Blue circles indicate only about 2 to 3 males calling from each location) The 2 blue circles to the east of the river indicate a small population that has set up residence in a flooded wetland along one of the side creeks that flows into the Vermillion.



**Tree Frog** habitat along the Vermillion River: Below is a photo of the Vermillion River looking down stream to the south from the 314 st. bridge. Tree Frogs were heard calling in the flooded field east of the trees to the left. Photo on the bottom is the flooded field where they were heard...right at the edge of the tree line.



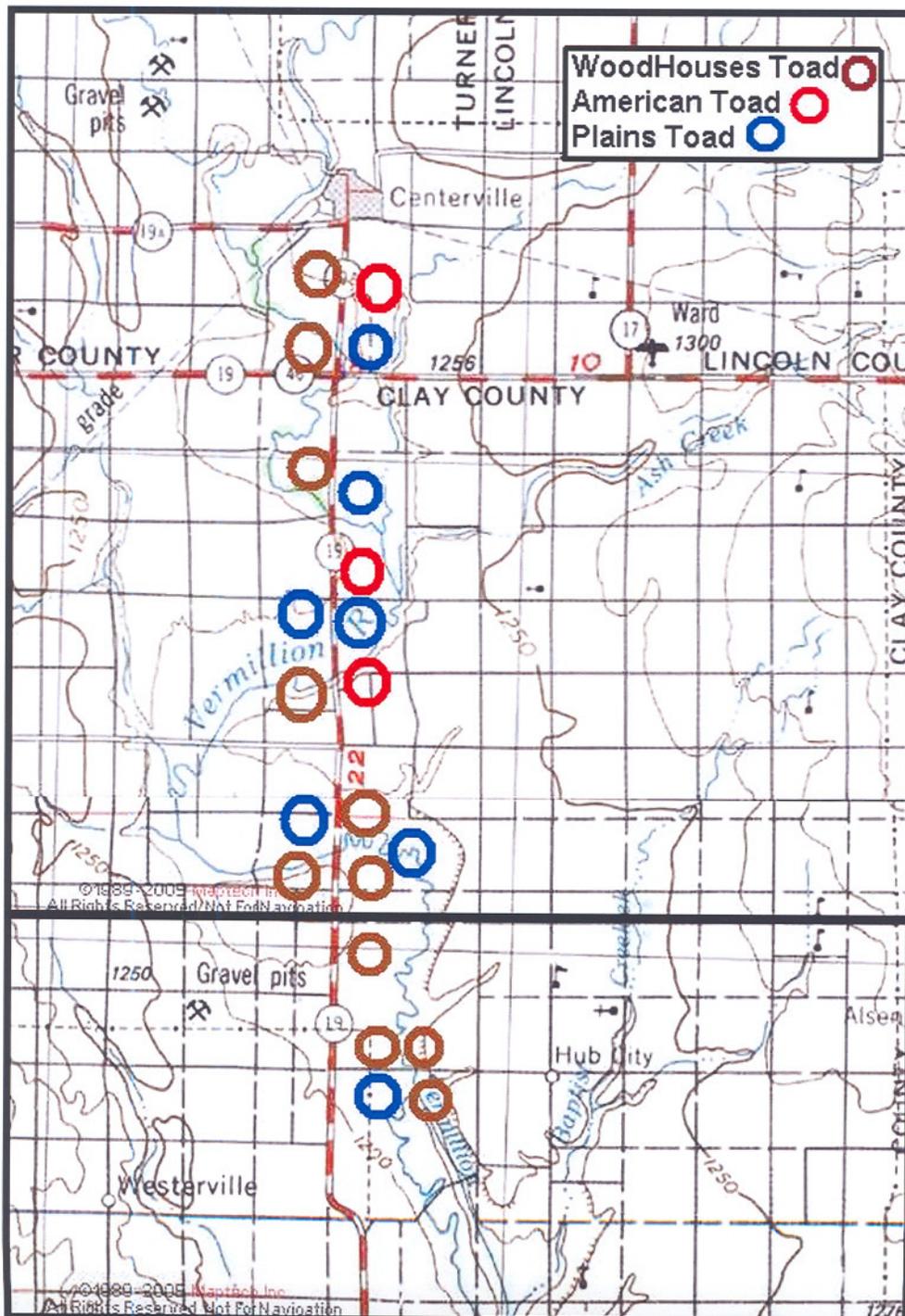
**Tree Frog** habitat along 313 st. looking south (?) A temporary flooded area along the old channel of the Vermillion River.



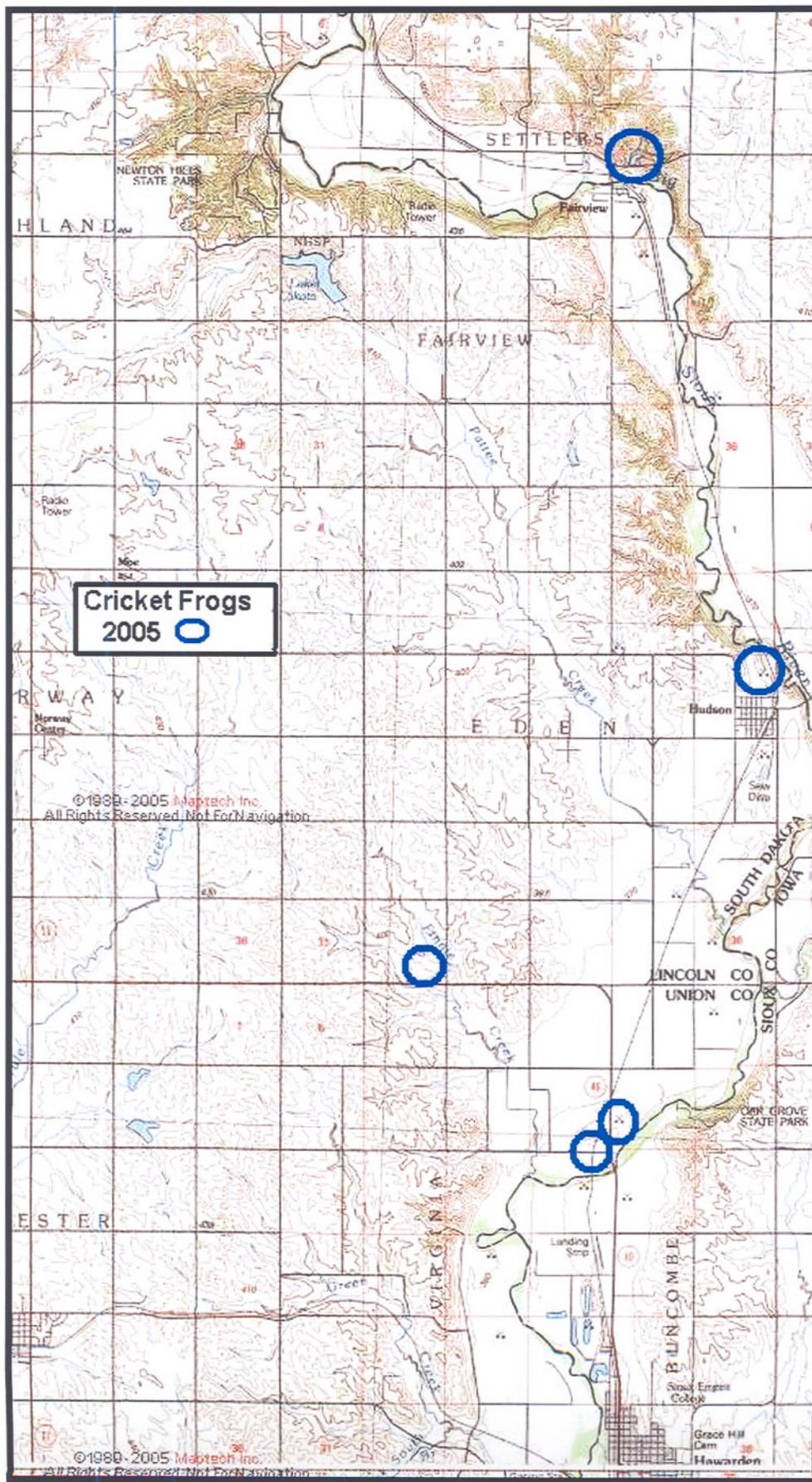
This a photo of that wetland along 314 st. a mile to the east in the side creek valley. This appeared to be a more permanent wetland.



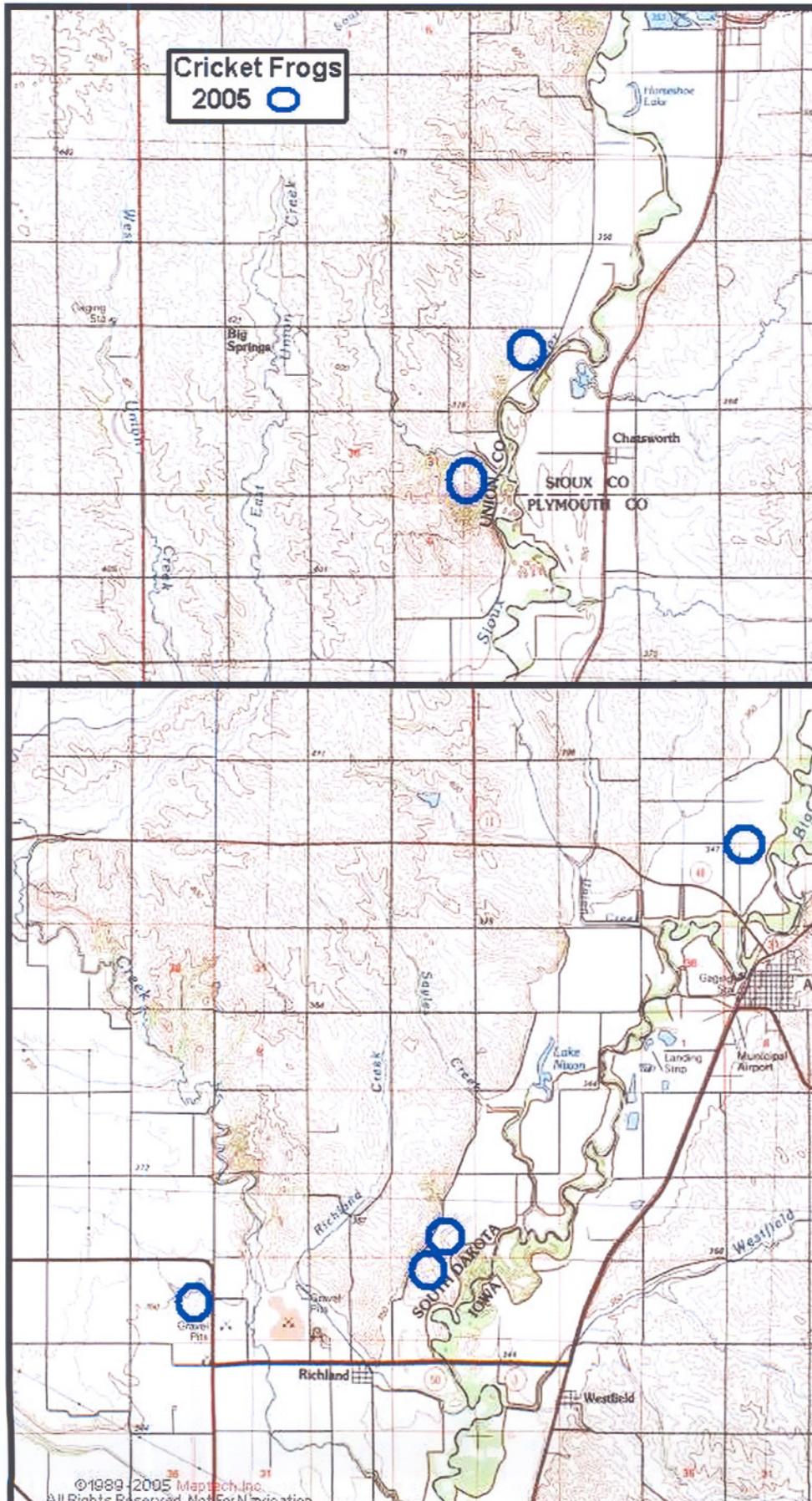
**Toads 2005:** Here is a sampler of Toad activity along the Vermillion River from Centerville down to Hub City. On the night of June 16 there was nearly a constant deafening roar of Toads all along this stretch of the flooded river. All the low lying fields were full of water and calling Toads! They began calling promptly at 9:00 as I began south from Centerville and continued on until the flooded region subsided down below Hub City. Toads and Leopard Frogs could be heard scattered out all along this region...but the sheer intensity of their numbers along this particular stretch will be quite unforgettable for some time to come!



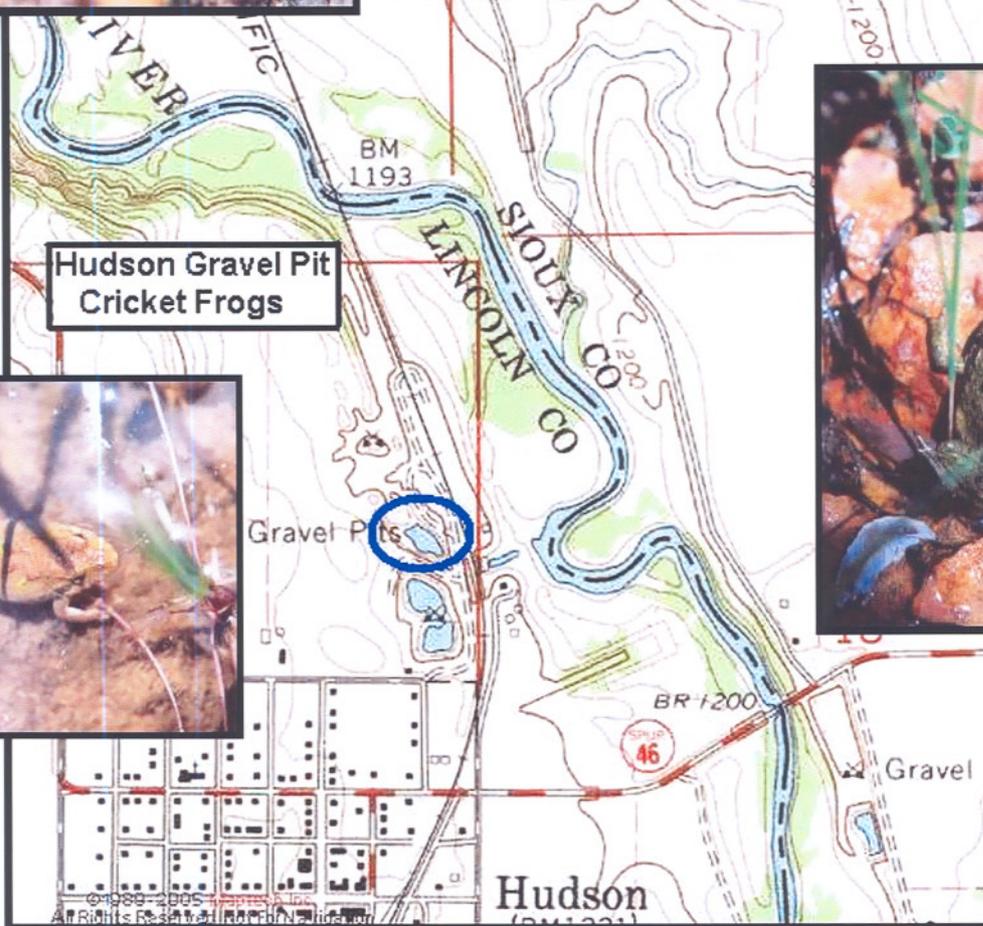
Cricket Frogs 2005: Night of June 14 along the Big Sioux River.



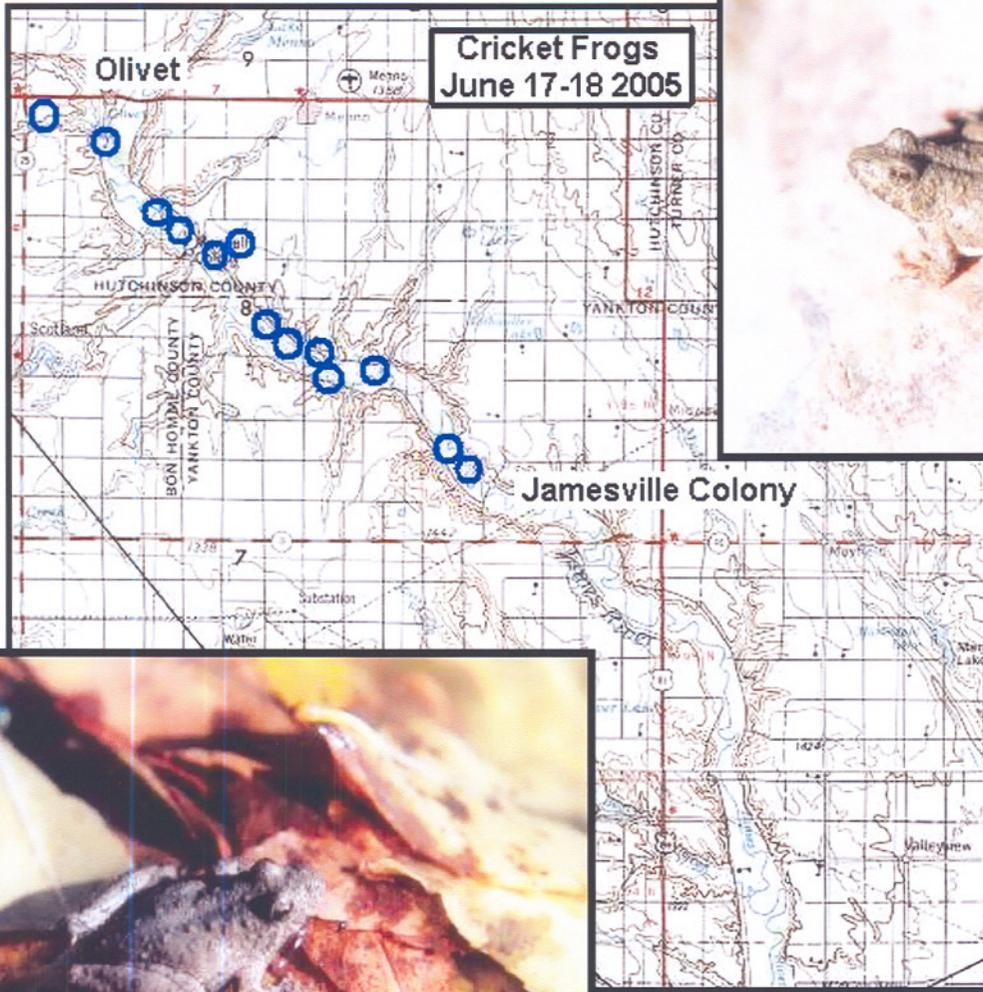
Cricket Frogs along the Lower Big Sioux River...night of June 14.



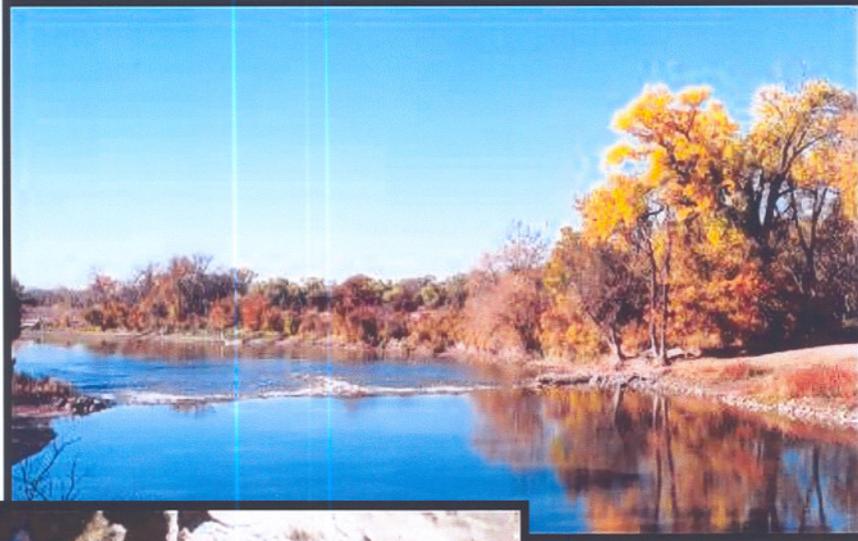
**Cricket Frogs** at the Hudson Gravel Pit: Now known as the “Sid and Hildegard Rollings GPA”...this abandoned gravel pit is the home of a large population of Cricket Frogs.



**Cricket Frogs** in the James River Valley: 13 separate populations were heard calling in a stretch of the valley from Olivet down to the Jamesville Colony. It is certain that more will be discovered in the surrounding upland ponds and wetlands since one colony was heard two miles to the west of Olivet on the edge of an upland ravine.



**Cricket Frogs at Olivet in October:** On the morning of October 17... Two Cricket Frogs were seen on the edge of the James River at the River Park by Olivet. One was immediately captured, photographed and released. The other one was observed briefly before it hopped into the cold water and disappeared.



Below is an example of some Cricket Frog habitat a mile south of Olivet where a colony was heard calling in June. It was later discovered that the pond was made by a Beaver dam.



**Canadian Toads** were heard in areas alongside Tree Frogs in the NE counties. (See Tree Frog map)

**Woodhouses Toads** were heard in scattered localities alongside Tree Frogs and Cricket Frogs in the lower Big Sioux Valley and in the James.

**American and Plains Toads:** These were heard in sometimes abundant numbers across eastern South Dakota...but it seemed that they began calling late this year. The first ones weren't heard until well into the first week of June. In fact...one curious note: Tree Frogs were actually heard calling in south central Minnesota 2 weeks earlier than usual... Before the Toads began!

**Bullfrogs.** These were heard at only 3 locations this year: At Arrowhead Park near East Sioux Falls...at a gravel pit north of Yankton, and at Lake Lakota in Lincoln, Co. A special note concerning the population at Lake Lakota: This is the first year that Cricket Frogs were Not heard by me. Whether this is a result of not spending much time there this year or whether the Bullfrogs gobbled them all up is still not known. This area should be closely monitored in the future as possible evidence of the destructive tendencies of this locally introduced species.

**Chorus Frogs:** These marvelous, hardy little frogs were heard almost everywhere in eastern South Dakota calling from nearly every damp portion of the landscape!

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Amphibians Not found in 2005:

**Mudpuppy.** None were found this year. There may be a reference to an old record of a specimen taken at Sand Lake NWR in 1979 (Becker?)...but that information is not at hand at the moment.

**Plains Spadefoot Toad:** None of these were seen or heard during this year's survey. Jeff LeClere reported seeing several of them near Beloit, Iowa along the eastern side of the Big Sioux River. He mentioned that they were out moving around on a night that was Not particularly warm or humid. He stated that this was unusual for them...as they are usually not encountered under such conditions.

**Tiger Salamander:** I'm including this species here even though one dead specimen was seen at the bottom of an abandoned well in the James River Valley in May. I'm sure there are still healthy populations still out there...I just happened to not encounter any live ones crossing the roads at night.

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This concludes the account of species in Eastern South Dakota for 2005. Some range maps were extended...some weren't found were they have been in the past. It is still (and will continue to be) a work in progress...as I fully intend to return as often as possible in the coming years.

Tom Jessen...Mankato, Minn.

(November...2005)

