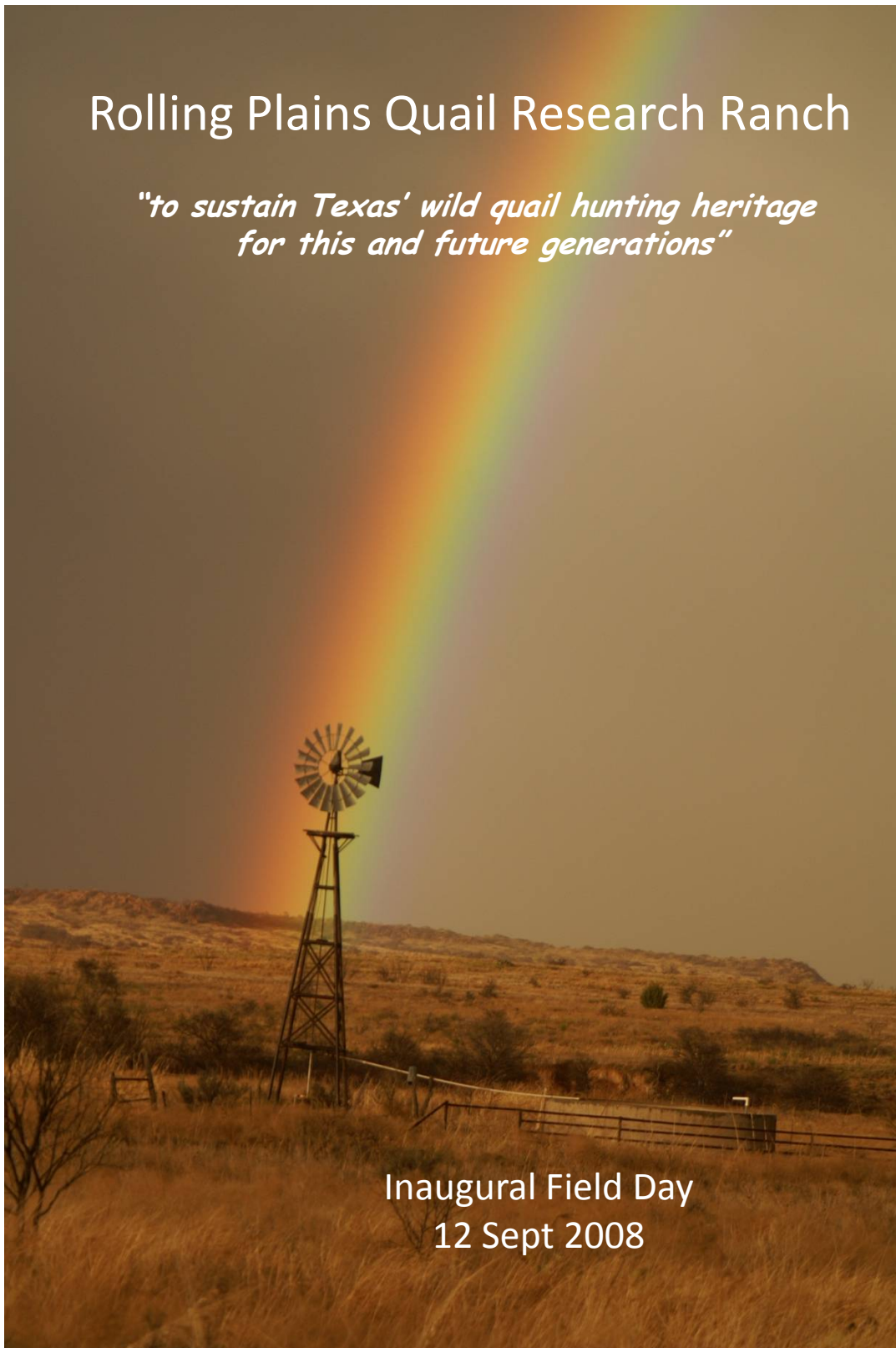


Rolling Plains Quail Research Ranch

*"to sustain Texas' wild quail hunting heritage
for this and future generations"*



Inaugural Field Day
12 Sept 2008

A Quail Odyssey . . .

Welcome to the RPQRR and our 1st annual Field Day! An "odyssey" is defined as "an extended adventurous voyage or trip; an intellectual or spiritual quest, i.e. an odyssey of discovery. And so we set sail! As I've visited with other "students of quail" we share excitement about the possibilities and potentials that reside on the horizon. I hope you leave today sharing my passion for this ranch, and for this mission. Bon voyage!

-- Dale Rollins



Vision: To sustain Texas' quail hunting heritage for this, and future, generations.

Mission statement: To provide land managers, and other stakeholders, with timely, relevant technology and management schemes for enhancing quail populations in the Rolling Plains of Texas.

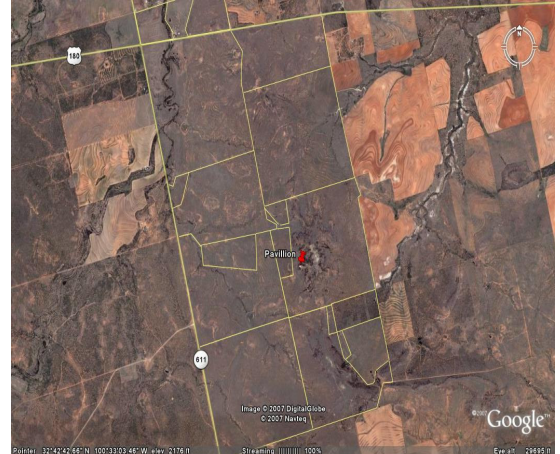
Purpose: Provide timely, relevant management information to land managers in order to sustain bobwhite and scaled quail populations, and the requisite plant and animal communities upon which quail depend. The RPQRR will function as:

- a research facility to develop and evaluate management schemes aimed at enhancing quail habitat;
- a demonstration facility to disseminate technologies and techniques which will permit adoption of quail-friendly best management practices;
- a forum for information exchange among land managers, hunters, and rural
- economies interested in sustaining quail hunting in Texas.

RPQRR at a glance

By the numbers:

- 4,720 acres in size
 - 80 ac cropland
 - 700 ac CRP
 - Remainder rangeland
- 25 "mile markers" for call counts
- 104 t-post arrays for vegetation measures established
- 21 species of woody plants identified
- 27 "herp arrays"
- 422 quail leg-banded in 2007-08
- 96 quail radiotagged in Mar 2008
- 5,350 mesquites sprayed
- 110 miles of helicopter transects flown
- 4,000 "trap-nights" of rodent trapping



Leadership

Board of Directors

- Rick Snipes (Pres)
- A. V. Jones, Jr.
- Ray Stoker, Jr.
- Jack Fields
- Joe Crafton

Advisory Committee

- Paul Melton (chair)
- Don Aiken
- Buddy Baldrige
- Rory Burroughs
- Deborah Clark
- Tim Connolly
- Alan Heirman
- Rod Hench
- Ricky Linex
- Wayne Jacobson
- Dr. Jason Johnson
- Chip Martin
- Kent Mills
- Robert Perez
- Chuck Ribelin
- Chip Ruthven
- Jeffrey SoRelle
- Roy Wilson
- Justin Trail
- Dr. Darrell Ueckert



Staff

- Dr. Dale Rollins (Director)
- Lloyd LaCoste
- Dr. Eddie Lyons
- Drew McEachern
- Dave Barre
- Chris Snow
- Rachel Vega
- Cathy LaCoste
- Jeff Masters

Interns

- James Jackson
- Barrett Koennecke
- Angel Garcia
- Brandon Wilson
- Josh McGinty
- Corbin Neill
- Mark Baxter

Collaborators

- CKWRI-TAMU-Kingsville
 - M. Schnup
 - J. Sands
 - N. Gruber
 - T. Teinert
 - E. Redeker
 - Dr. F. Hernandez
 - Dr. L. Brennan
 - Dr. S. DeMaso
- Angelo State University
 - Dr. Cody Scott
 - Dr. Kelly McCoy

Fundraising

since March 2007

- The Conservation Fund
 - donated Ranch property
- Quail Unlimited
 - Park Cities (\$570,000)
 - Cross Timbers (\$20,000)
 - Kubota tractor
- W. A. "Tex" Moncrief
 - \$1 mil for endowment
- Misc. donors (\$58,000)
- Commercial donors (non-cash)
 - Dow AgroSciences
 - Warren Caterpillar
 - Garmin Int'l.
 - Turner Seed Co.
 - All-Season Feeders



Answer the Call

Help fund the RPQRR!

The RPQRR relies upon the generosity of "students of quail" and their associated allied industries. The RPQRR is a 501(c)(3) foundation--donations are tax-deductible to the extent allowed by IRS rules.



Population monitoring

Call Counts: A total of 25 permanent call count stations ("mile markers") are situated across the Ranch divided into a "West line" (13 stations) and an "East line" (12 stations). Call counts were conducted twice weekly beginning on 19 May 2008. Counts averaged 3.4 roosters and 27.0 calls/stop. Mile marker 11E (south side of Ranch) averaged the most roosters heard with 4.7 roosters/count across all weeks. Lowest counts were observed at MMs 0 West (Doc pasture), MM 6 East (Suzie pasture) and on 2 sites along "Telemetry Ridge" (MMs 8 and 9 East).

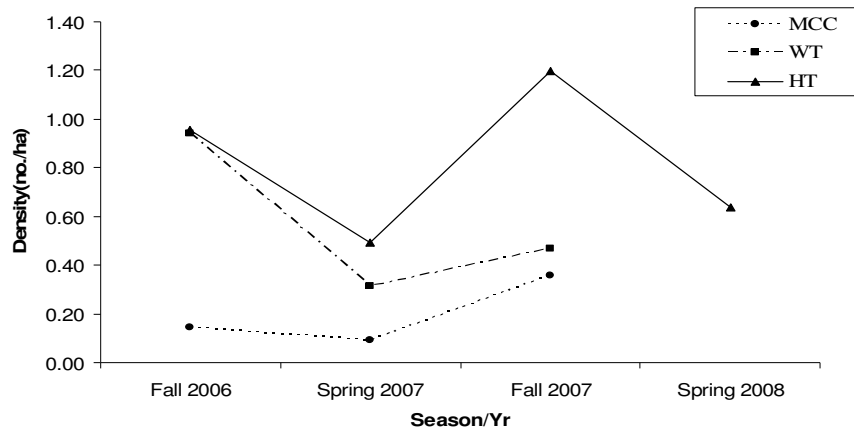
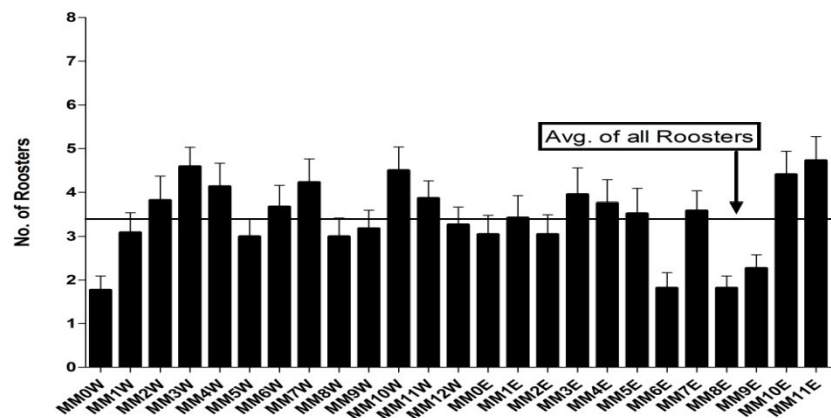


May - Aug '07

- 5:1 Bobwhite:Blue
- 9.2 whistling males/stop

May - Aug '08

- 12:1 Bobwhite:Blue
- 3.4 whistling males/stop

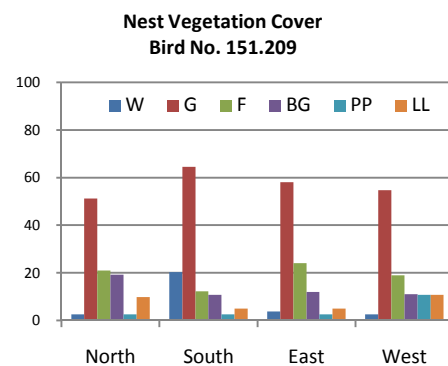
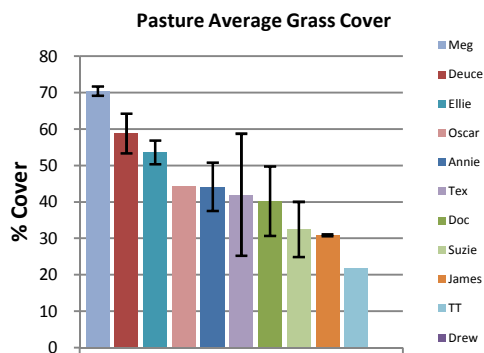
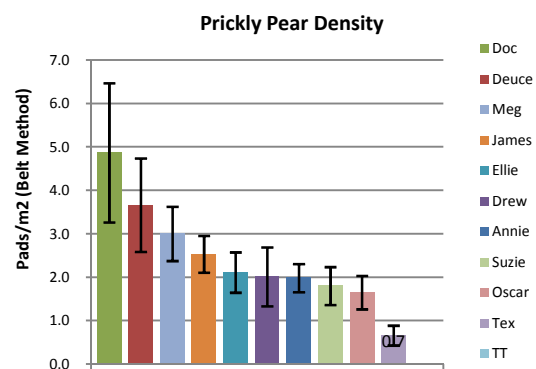
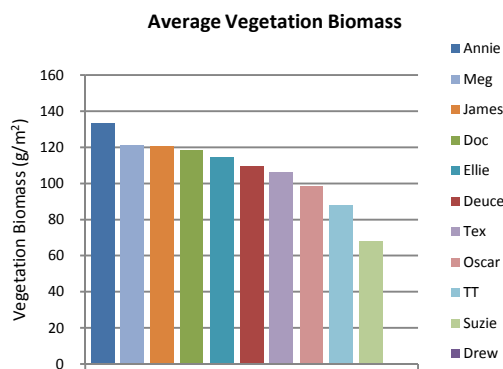


Trend data of density estimates (bird/ha) obtained using distance sampling (walked transects [WT] and helicopter transects [HT]) and morning covey-call surveys (MCC), Fisher County (Rolling Plains), Texas, October 2006 to 2007 and March 2007-2008 (Schnupp et al. 2008).

Vegetation monitoring

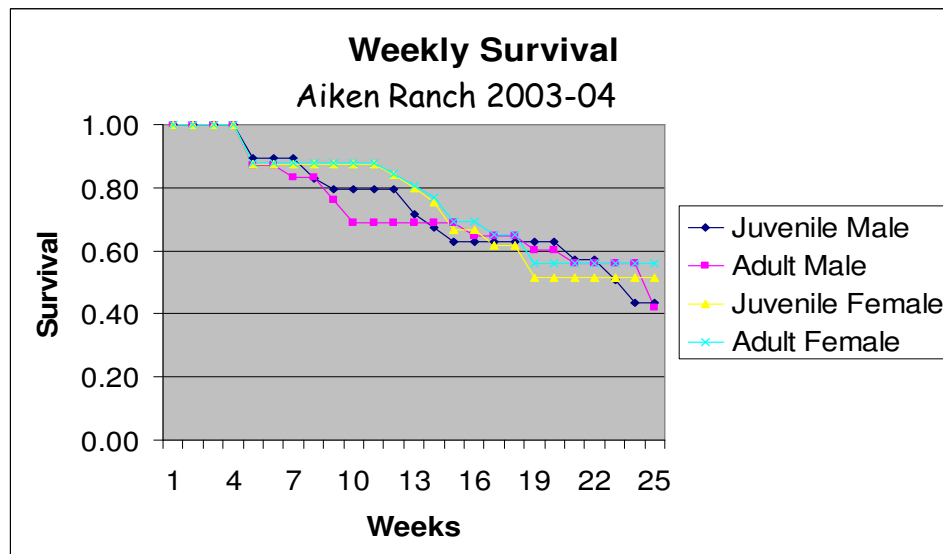
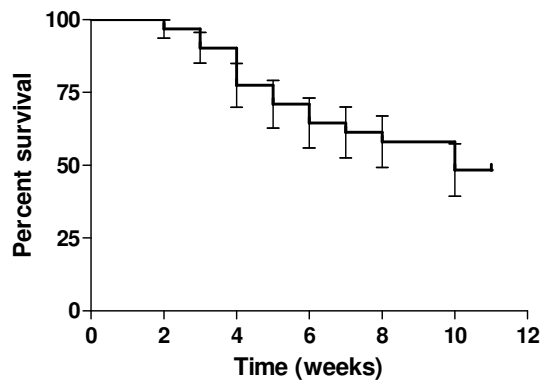
Objective: Collect baseline data on brush canopy cover, prickly pear, and herbaceous cover.

We established 108 permanent points at which brush canopy cover ('07), prickly pear, and herbaceous cover was characterized. Canopy cover was measured by line intercept. These transects will be re-sampled at 5-year intervals in order to assess vegetation change (or more frequently in response to certain experiments). Additional measurements include Robel pole for estimating visibility.



Radio telemetry

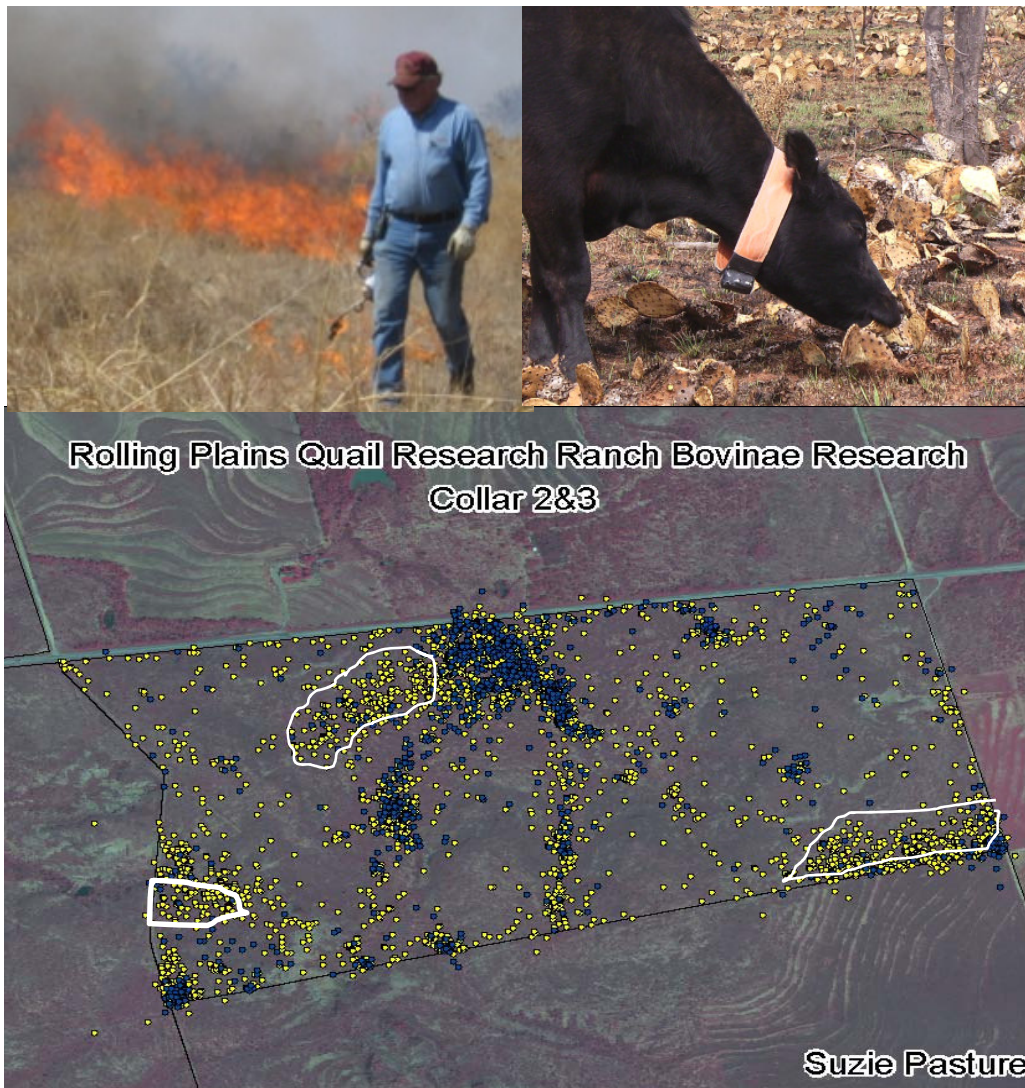
Survival estimates: Trapping of quail began in March and continued through April. A total of 93 quail (including 11 blue quail) were radiomarked from mid-Feb through mid-March. However, because of lack of manpower, surveillance of those birds did not begin in earnest until 15 May. Between 15 March and 15 May, 61 birds were either killed or lost. Weekly survival was estimated from the birds remaining on the air as of 15 May. At that time 32 birds were alive and accounted for. Survival was estimated weekly from 15 May thorough 31 July. The probability of a bird surviving this time period was 0.33 (SE = 0.072). As of Sept 1, 9 hens were still alive.



Patch-Burn-Grazing

Objectives : (1) Evaluate impacts of patch-burn-grazing on vegetation and arthropod dynamics. (2) Evaluate post-burn grazing as a tool to reduce prickly pear.

The long-standing paradigm for grazing management is to promote uniform grazing, which in turn tends to homogeneous rangelands. By contrast, patch-burn-grazing tends to ward heterogeneity. We are using GPS-collared cows to monitor grazing preferences and vegetation and arthropod dynamics over the next 5 years.



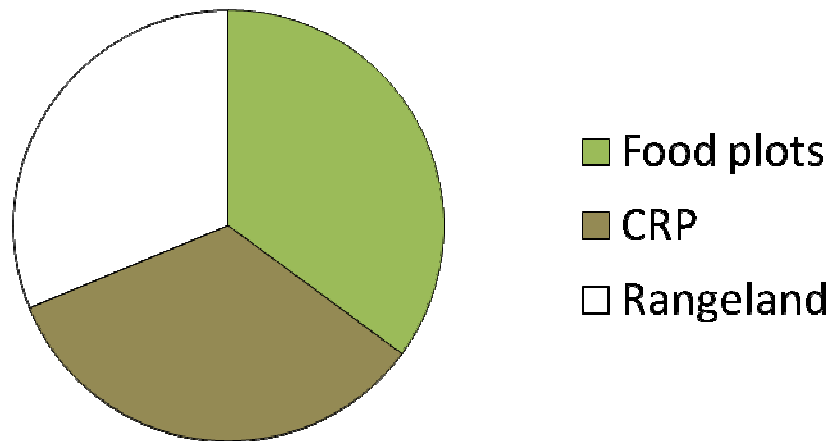
Arthropod dynamics

Objectives : (1) to collect baseline data on arthropods in various habitats, and (2) compare efficiency of sweep nets vs. pitfall traps.



Arthropods are the staple of bobwhite diets whenever they are available, and are vital for chicks. Sweep nets and pitfall traps were used to sample the insect community on burned and unburned sites across the ranch and in various vegetation types. To compare insect communities, 5 permanent waypoints were established in each of the vegetation types. At each point, a random heading was established, and 25 sweeps were conducted in 4 directions at each point. To compare insect communities in burned vs. unburned 2 arrays (transects) of 10 pitfall traps were established in (a) each burned area and (b) unburned areas 100 yards from burned areas. Pitfalls were checked every 3 days for 15 days. Insects collected will be sorted to Order and weighed at a later date.

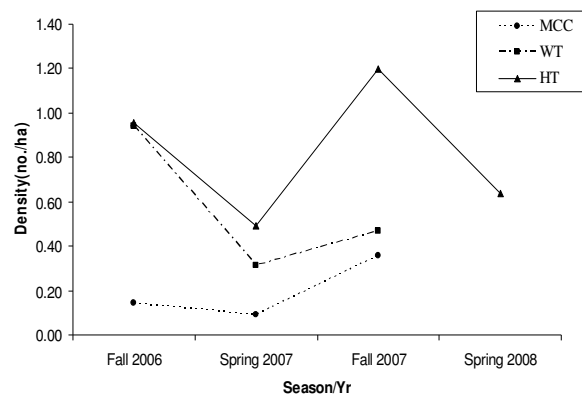
Arthropod abundance (Sweep net data, Aug 2007)



Population ecology (with CKWRI)

Objective: Monitor demographics and trends of quail populations and how they are impacted by site and management factors.

Results: We use radio telemetry, band recovery, call counts, and aerial surveys to monitor annual demographics. We trapped 422 quail in Feb-Mar and radiomarked 96 of those..



Sample size (n), estimated winter survival (S_w) of bobwhites, estimated with radio telemetry from 16 November 2007 to 29 February 2008 in Fisher (Rolling Plains) and Brooks Counties (Rio Grande Plains), Texas, USA. (Sands et al. 2008)

Site	n	S_w	Upper	Lower
Rolling Plains	60	0.321	0.429	0.213
Rio Grande Plains	93	0.176	0.237	0.117

Sample size (n), age ratio (juveniles:adults) , and sex ratio (males:females) of northern bobwhites, estimated by trapping from 16 November 2007 to 29 February 2008 in Fisher (Rolling Plains) and Brooks Counties (Rio Grande Plains), Texas, USA., Sands et al. 2008

Site	n	Age ratio (j:a)	Sex Ratio (m:f)
Rolling Plains	118	3.00	1.32
Rio Grande Plains	166	9.73	1.01

Helicopters as a census platform (with CKWRI)



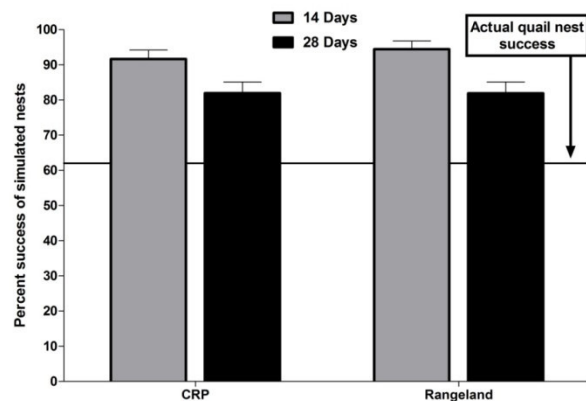
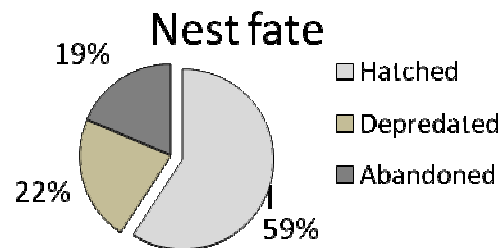
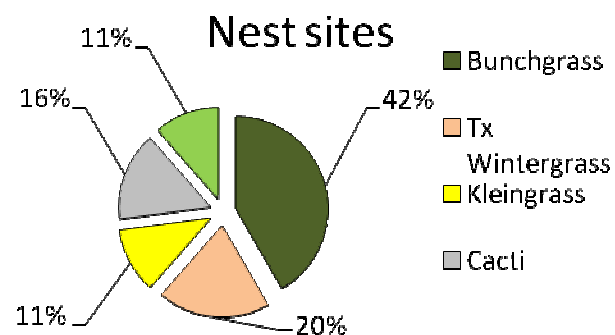
Nesting ecology

Objective: Determine nest site selection and hatch rates in various habitats.

Results: A total of 27 quail nests were located between 15 May and 25 July 2008; most were situated in bunchgrass. A total 16 nests hatched (59%), 6 were depredated, and 5 were abandoned. Four hens (all juveniles) re-nested as of 1 Aug. Two hens successfully hatched both nests; 1 abandoned first nest but hatched second, and other had both nests destroyed.

We also established 144 simulated ("dummy") nests; 72 nests were constructed in rangeland and CRP vegetation types. There was no difference in survival of simulated nests at 28 days between CRP and rangeland vegetation types. Overall survival of simulated nests at 28 days averaged 82%. There also was no difference between nests placed in grass and prickly pear within the rangeland vegetation type.

Results from previous research indicated that, above ~300 suitable nest sites/acre, nest predation may be mitigated. All areas had nesting cover above this level. The CRP sites had an average of 1,062 bunchgrass clumps/acre and rangeland sites averaged 425 bunchgrass clumps/acre and 172 prickly pear clumps/acre.



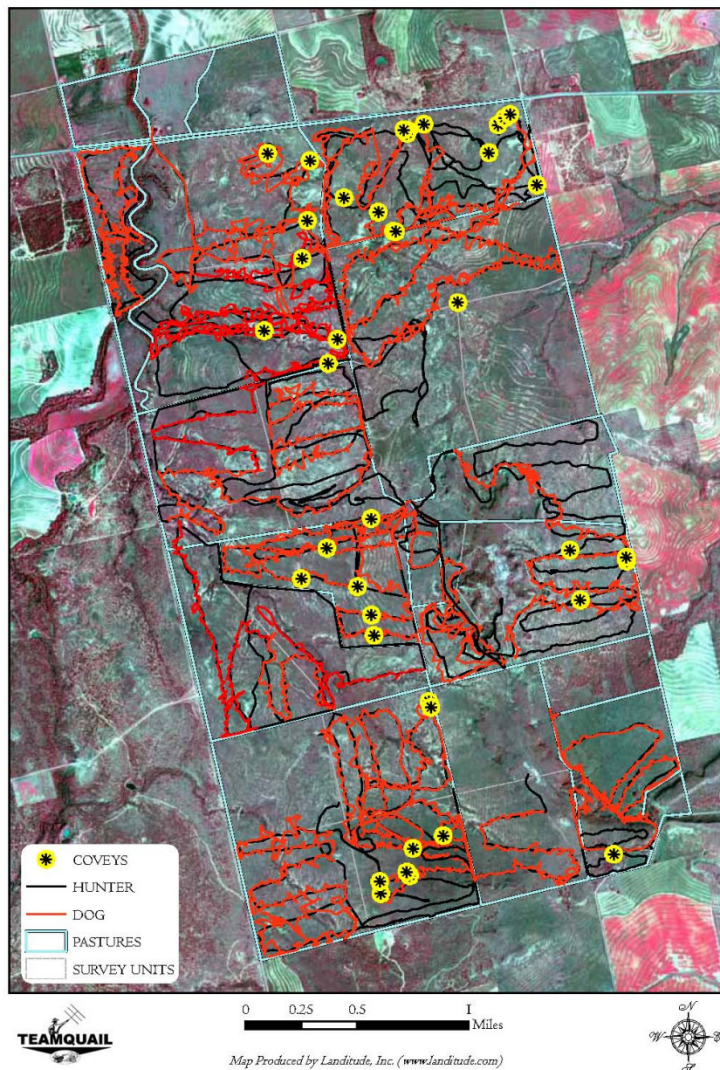
GPS Bird dogs (with CKWRI)

We are evaluating the utility of GPS-equipped bird dogs as a census technique, following on the heels of recent research at CKWRI and Okla. St. Univ. Total ranch censuses are attempted with 15 to 25 teams of bird dog handlers in Mar and Oct. These data will be compared to counts from helicopter and whistle counts. Thanks to Garmin Int'l. for supplying the Astro dog collars.



Rolling Plains Quail Research Ranch

Pointing Dog Quail Survey (October 22 - 23, 2007)



Characterization of Herpetofauna Community

Objectives : (1) to collect baseline data on herp community in 3 habitats, i.e., Rangeland, CRP, and Old Cropland). and (2) compare efficiency of pitfall traps, funnel traps, cover boards, and time-constrained collecting for sampling the herp community.

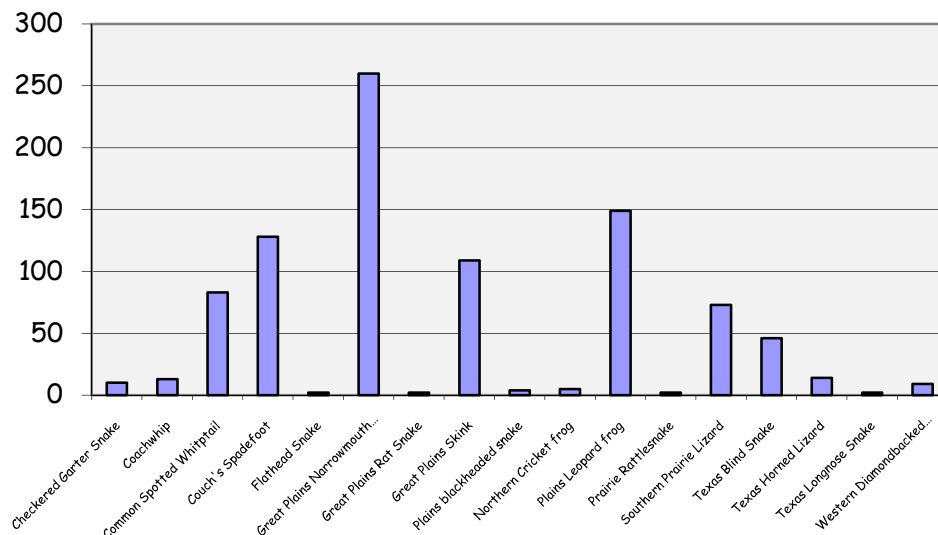


"Herps" (i.e., reptiles and amphibians) may impact quail abundance, either directly or indirectly. Directly, some snakes represent threats to eggs, chicks, or adult birds. Indirectly, herps may be important "buffer species" for various predators of quail (e.g., raptors, roadrunners).

Results:

- amphibians more common than reptiles
 - Narrow-mouthed Toads
 - Spadefoot toads
- no difference of species composition among habitat types

Frequency of Captures by Species



Habitat management efforts

Mesquite Spraying: We sprayed 5,350 mesquite trees using the "Brush Buster" IPT foliar method (1:1 mixture of Reclaim and Remedy in water with surfactant). Pastures targeted for spraying were the Suzie and Meg. A total of 604 gals of spray solution were used. Herbicides were donated by Dow AgroSciences.



Mechanical control: Warren Caterpillar donated the use of a D5 tractor during the month of July. We used the dozer primarily to grub junipers from the east side of telemetry ridge. While we had access to P. Melton's rangeland disc, we had about 20 miles of additional discing done in mid-May along existing roads and in 4 CRP fields (Babe, Annie and Lucy pastures). Sorghum and sorghum alnum were broadcast behind the disc. Good to excellent stands were attained in this manner. Additional discing was done in 2 sites to prepare firelines for burning in prickly pear infestations (west side of Chittam along FM 611 and east side of Annie along boundary line). The Chittam site was seeded to sorghum alnum, sorghum, catjang pea, lablab pea ('Rio Verde'), rape, and buckwheat.

Bermudagrass conversion: The 47-ac bermudagrass field was sprayed with 5 qts/ac of glyphosate in May 2007, but bermuda suppression was only rated as "fair." Subsequently milo was sown and yielded almost 1,500 lbs/ac. The field was sprayed again in early June 2008 with 3 qts/ac glyphosate, and then a no-till drill was used to plant milo. Suppression of bermudagrass was good (initially). The "late" milo crop survived the July hot spell and as of Sept. 1 looked quite good.



Future projects (to be initiated in '09)

Rattlesnake ecology: 10 snakes will be fitted with radio transmitters in order to monitor their movements and habitat use.



Roadrunner ecology: 1 Roadrunners will be fitted with radio transmitters in order to monitor their nests, with goal of videotaping prey delivery at the nest.



Prickly pear & quail: Various combinations of fire and herbicides will be monitored as to cacti mortality, forb dynamics, and arthropod dynamics.



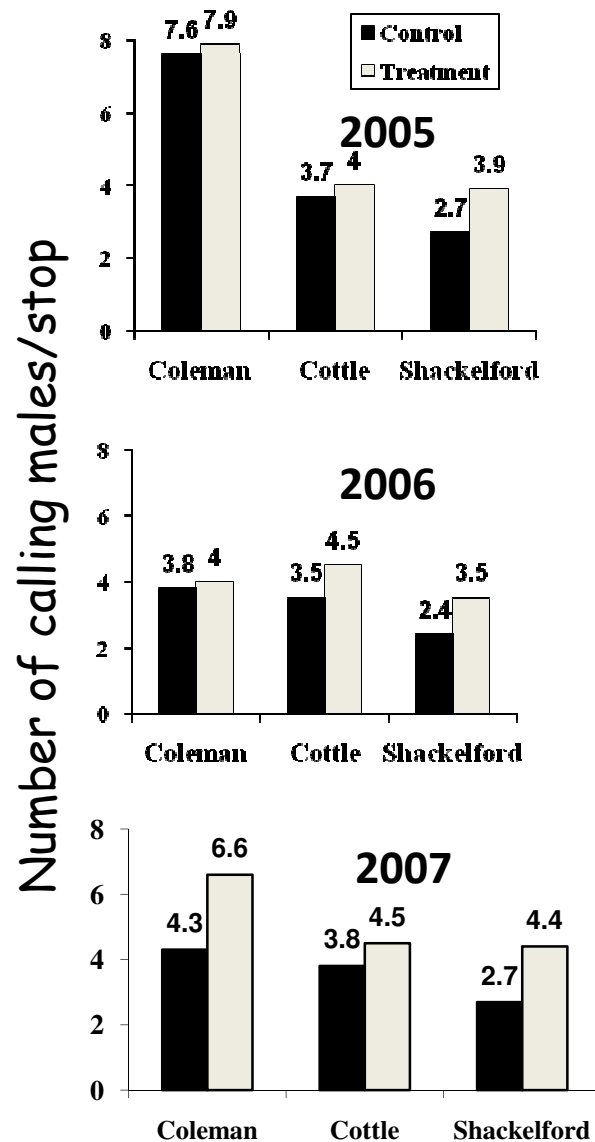
Raptors & quail: Cooper's hawks and Northern harriers will be radiomarked and their prey selection monitored as it relates to habitat conditions.



Ragweed seed dynamics: Seed production of western ragweed plants will be monitored in October at various sites across the RPQRR.



Off-site research



Bobwhite abundance (number of calling males) relative to brush management in 3 counties in the Rolling Plains of Texas, 2005-2007.

Upcoming events

September

- 19 (Mitchell Co. QUAD)

October

- 2-3 (Texas Quail Study Group Meeting – Odessa)
- 20-21 (Bird Dog Census)
- 23-24 (Brush Sculptors symposium)



January

- 30 (2nd Distinguished Lectureship in Quail Management)

March

- 12 (Park Cities QU chapter banquet)
- 29-31 (QuailMasters Session 1)

Donation Form Gift Giving Opportunities

Please check the appropriate category

- ☐ "Unrestricted" (to support general operational costs)
- ☐ "Tribute" (to honor that special someone or bird dog)
- ☐ Endowment fund
- ☐ Bequests
- ☐ Fund a Specific Research Project
- ☐ Other

Amount of Gift: \$ _____

Name: _____

Mailing Address: _____

City, State, and Zip: _____

Telephone: _____ E-mail Address: _____



Would you prefer your gift be announced OR remain anonymous?

Make checks payable to: "RPQRF", and mailed to:

Dr. Dale Rollins, Director

7887 U.S. Highway 87 N.

San Angelo, TX. 76901

325-653-4576

d-rollins@tamu.edu

The RPQRF is a 501 (c)(3) nonprofit foundation; donations are tax-deductible, but please confer with your tax advisor.