

Pronghorn Antelope Diets in Texas and Southwest

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Marfa Flat, Texas 1947 Beuchner ¹

Forbs	67%
Browse	30%
Grass	3%

Forbs

Cutleaf daisy	16%
Wooly paperflower	11%
Goathead	6%
Groundsel (Senecio)	5%
Fleabane	3%
Gaura	2%
Chaff flower	2%
Wild buckwheat	2%
Dalea species	2%
Mex sagewort	2%
Broom snakeweed	1%
Lazy daisy	1%
Eryngo	1%
Sida	1%
Tetaneuris	1%
Bundleflower	1%
Mentzelia	1%
False nightshade	1%

Browse

Hackberry	3%
Old man's beard	3%
Juniper	3%
Butterflybush	2%
Walnut	1%
Oak	1%
Pricklypear	T
Black dalea	T

Trans Pecos, Texas 1965 – 1967 Hailey, TPWD ² (6 Locations)

Forbs	62%
Browse	31%
Grass	7%

Forbs

Spurges (several sp)	37%
Annual broomweed	4%
Bladderpod	3%
Plains zinnia	3%
Bundleflower	3%
Broom snakeweed	2%
Leatherweed croton	2%
Horehound	2%
Dyschoriste	T
Nightshade	T
Sida	T
Tidestroma	T
Gaura	T
Portulacca	T

Browse

Cholla	8%
Apache plume	6%
Gregg dalea	4%
Juniper	3%
Old man's beard	3%
Tarbrush	2%
Skeletonleaf goldeye	2%
Pricklypear	2%
Cenizo	T
Guayacan	T
False mesquite	T
Desert willow	T

Compilation of 4 Studies New Mexico 1956-1959 Russell ³ (3 Studies)

Arizona 2003-2005 Brown ⁴ (1 Study)

Forbs	82%
Browse	16%
Grass	2%

Forbs

Mex sagewort	17%
Wild buckwheat	11%
Broom snakeweed	6%
Spurges	4%
Stenandrium	4%
Wooly paperflower	4%
Plains zinnia	3%
Filaree	2%
Aster	2%
Globemallow	2%
Borage	2%
Gaura	1%
Rushpea	1%
Cutleaf daisy	1%
Ragweed	T
Tallow weed	T

Browse

Cactus	6%
Sand sage	3%
Mesquite	2%
Apache plume	T
Juniper	T
Skunkbush sumac	T
Ephedra	T

¹ Helmut Beuchner, American Midland Naturalist, 43(2):257-354, 1950

² Tommy Hailey, TPWD, PWD-BK-7100-46, 1979

³ Paul Russell, NM Game and Fish, Bull No. 12, 1964

⁴ David Brown, 23rd Pronghorn Workshop Proceedings, 2008, in press

T - Less than 1% of yearlong diet. These plants may be a significant food source for some seasons.



Summary and Management Implications

These studies indicate conclusively that pronghorn are primarily forb eaters.

In the Helmut Beuchner study, conducted in the Marfa Flat area, pronghorn consumed 228 different plant species:

- 160 species of forbs (124 species of perennial forbs; 36 species of annual forbs)
- 53 species of woody plants / cactus
- 15 species of grass

Pronghorn eat many different species of forbs, but their primary consumption is perennial forbs. In these arid climates, annual forbs are unreliable.

Pronghorn consume significant amounts of browse and cactus, especially during winter and/or drought periods. Browse may make up as much as 60% of the diet during certain times of the year. Cactus is often the most important type of browse consumed.

Tommy Hailey, in his study across six locations in the Trans Pecos, mentioned that the only plant to receive heavy use during all four seasons was cholla. He expressed the belief that cholla is an extremely important plant during critical dry periods and that it may help prevent die-offs.

Pronghorn consume very little grass; most of the time, generally less than 5%. During some seasons, when grass is green and abundant, they may consume as much as 20% for brief periods. Based on these studies across a very wide geographic area, it is clear that pronghorn should not be considered to be competitive with cattle.

In several of these studies, pronghorn consumed significant amounts of plants known to be toxic to livestock. Broom snakeweed, which is toxic to cattle, made up 5% to 14% of the diet during certain seasons in three of the studies. Woolly paperflower, which is toxic to sheep, was the second most important plant for pronghorn in the Buecher study. Groundsel, or senecio, which is toxic to cattle and horses was the fourth most important plant for pronghorn in the Beuchner study. The liver of the pronghorn apparently has the ability to detoxify chemicals in these plants.

Pronghorn are primarily inhabitants of healthy grasslands and dependent upon good plant diversity, especially perennial forbs. During stress periods, such as drought, pronghorn seek to meet their nutritional needs in several different ways:

- Travel away from grasslands to foothills, shrublands or canyon areas to consume browse
- Travel away from normal home range in search of pastures where forbs may be present
- Consume cholla or pricklypear

Pronghorn have the natural instincts to travel significant distances across several pastures or several ranches to find suitable food supplies and other habitat requirements. Net wire fences do not accommodate this kind of movement. Modification of old net wire fences to allow pronghorn movement is one of the most important practices that can be done in the Trans Pecos.

Pronghorn need year long access to water. Water should be kept available at all times, especially in pastures where livestock are vacated. Placing separate wildlife water troughs away from pens and water lots is helpful.

Range management practice that favor healthy grasslands and good pronghorn habitat include conservative stocking rates; adjustments during drought; seasonal grazing, or rotational grazing techniques that provide regular rest periods; and in some cases, selective brush management.