History of Rangelands in Honduras

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Columbus claimed Honduras for Spain when he set foot on its shores in 1502. Activities of the Spanish who followed him were not immediately concerned with livestock production or grassland management. They came to conquer and to search for gold, silver, and other riches of the New World. However, in 1525 Hernan Cortes brought cattle to Honduras and established his headquarters near the present town of Trujillo. Thus was established the major cattle industry of the country practically free of insects and diseases in the interior valleys where the rainfall averaged 30 inches during the summer months. Jaguars were the only recorded predators. Carefully prepared notes of the early explorers indicate wild lands were predominately grass. In this part of the world, Central America, these lands were called "sabana"; without trees they were called "pura sabana." The early Spanish used the word "praderias" for "sabana." A "praderia" was a landscape with many "prads" or flats of uncultivated areas with pastureable grasses. Later the Spanish used "sabana" which, through English usage, became savanna.

It is unfortunate that early Spanish explorers were unable to record specifics on the vegetation. Until the middle of the eighteenth century, plant taxonomy was relatively unorganized. Early taxonomic publications were mainly annotated lists of names consisting of short descriptive phrases. Very few, if any, Spanish explorers in Honduras were botanically oriented.

Johannessen (1963) listed several species as being present in the early days, but range conditions were not specific. The main species were Paspalum spp., lovegrass (*Eragrostis simpliciflora*), a threeawn (*Aristida jorellunsis*), an annual bluestem (*Andropogon brevifolius*), knotroot bristlegrass (*Setaria geniculata*), slender grama (*Bouteloua filiformis*), and Bermudagrass (*Cynodon dactylon*), which was very likely introduced from southern Europe. Jaragua grass (*Hyperhennia rufa*) was listed as an invader of former croplands, probably introduced, and also occurring on the ranges.

The former savannas of Rancho Repaco probably provides one insight to the history of Honduras grasslands. The 1,800-ha (4,448 acres) ranch recently acquired by the Pan American School of Agriculture represents the interior hills and valley floors of southeastern interior Honduras. The major thorny species which now dominate these sites are husache (*Acacia farnesiana*) and *Acacia tenuiflora*. Locally, these areas are called carbón thickets. Translated, carbón means charcoal, which is often obtained from these species.

Close observations of ungrazed and long-protected areas reveal several species that may have been of major importance prior to the invasion of brushy species. These include several bluestems, including big bluestem (*Andropogon gerardi*), broomsedge (*A. virginicus*), Elliott bluestem (*A. elliottii*), slender bluestem (*A. tener*), and silver bluestem (*Bothrichloa saccharoides*). Eighteen additional species have been collected and identified in the school herbarium. Two species of indiangrass (*Sorghastrum natans*) and (*S. setosum*) were found on the ranch. The genus Bouteloua was repesented by sideoats grama (B. curtipendula), and slender grama (*B. filiformis*). Crinkleawn (*Trachypogon* spp.) was very much in evidence, however, better adapted to the more gravelly clay soils at higher elevations in the understory of pine forests. Brownseed paspalum (*P. plicatulum*) was closely associated with the bluestem and grama grasses. Other genera included Panicum, Setaria, Heteropogon, Muhlenbergia, and a perennial stoloniferous species of Memosetum.

Due to exploitation of the Indian population through forced labor and the toll of foreign diseases introduced from the Old World, by 1600 just 20,000 of the original population of 1,200,000 remained. The few livestock owned by the Indians were loose on open, unfenced ranges. With the great decrease of the Indian "agriculturists," former cultivated areas were left to grass over. These, plus extensive grassy savannas, afforded opportunities for the Spanish to utilize the land they had conquered. Only a few Spaniards and Indians were left to manage the increasing number of cattle. Roundups occurred twice a year and then only for the harvesting of hides, tallow and some meat. Under such ideal conditions, the cattle population flourished. They became feral over the interior regions of Honduras.

Population changes in Honduras have influenced the management of land and cattle. The human population remained small, probably less than 100,000 people until the early nineteenth century. This small country became independent from Spain in 1821, the same year Mexico gained its independence from Spain. At that time Spanish trade restrictions were lifted and land ownership changes occurred which resulted in an increase of cattle. After two years of Mexican rule, Honduras became a republic in 1839. In the

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past 150 years approximately 75 to 80 rulers have been head of state. This fact alone may well account for the lack of a uniform and progressive management of natural resources, especially the rangelands.

Increase in the number of both cattle and people has been significant since the early 1800's. During the earliest part of the period there were only 100,000 people and 211,000 head of cattle (Johannessen 1963), but by 1978 the population was over three million people and 1,700,000 head of cattle (Simpson 1979). Honduras has reportedly one of the fastest growing populations in the Western Hemisphere. These facts further contribute to the ecological decline of the savannas.

Vegetative changes, from all accounts, also have been significant. Lopez' notes, carefully prepared in 1571, indicate that much grass or "pura sabanas" existed. These early accounts, plust the monumental investigations of Johannessen, further substantiate the downward trend of the savannas of interior Honduras. When the Spanish arrived, the savannas covered most of the valley floors and the slightly rolling adjacent foothills. They furnished the fuel for fires which, for many accounts, maintained a grassland ecosystem in the tropics. In subsequent years, great herds concentrating on the areas reduced the normal amount of accumulated dry unused grass. Consequently, many of these former grasslands have gradually deteriorated to a thorny and unpalatable scrubby brushland.

Although the modification of the Honduras grassland occurred as recent as 1850, recognized desirable species are still present for restoration. Most of the same technical problems associated with obtaining good range management in the United States are likewise to be found in Honduras. However, the element of political instability which has characterized this nation for centuries well may continue for some time. The per capita consumption of beef has declined from 7 kilos (15.3 lbs) in 1978 to 6.1 kilos (13.4 lbs.) in 1979. It is projected to decrease to 5.9 kilos (13 lb) by 1985. The population boom in Honduras takes place in the low income classes and these do not eat much beef. The country long has depended on the exportation of beef for economic reasons. In light of the present energy crisis and the price of oil, many of the countries now purchasing foreign oil may have less money for purchasing Honduran beef.

The history of cattle ranching and range management of the Central American countries is very interesting and much more research of the records is needed and desired. These early records are just waiting to be researched in the Archives of Seville and Madrid, Spain.

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Simpson, James R. 1979. World cattle cycles and the Latin American beef industry. Staff paper 129. Food and Resource Economics Dept. Institute of Food and Agricultural Sciences, Univ. of Florida, Gainesville, FL 32611. 24 p.

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Upcoming Conservation Meetings

September 24-26	International Association of Fish and Wildlife Agencies 70th Annual meeting, Galt House, Louisville, Kentucky. Contact Jack H. Berryman, IAFWA, 1412-16th Street, N.W., Washington, D.C. 20036
September 24-26	The Nature Conservancy annual meeting will be held at the Key Bridge Marriott Hotel, Arlington, Virginia. Contact T. Ruffin, Suite 800, 1800 North Kent Street, Arlington, Virginia 22209
September 28-October 1	American Forestry Association 105th Annual meeting, The Balsams, Dixville Notch, New Hampshire;theme: Our Energy Future-Local Response to World Needs. Contact Rexford A. Resler, Executive Vice President, 1319-18th Street, N.W., Washington, D.C. 20036
Oct. 5-9	Annual meeting, Society of American Foresters, Spokane Riverpark Center, Spokane, Washington. Contact John Barber, Society of American Foresters, 5400 Grosvenor Lane, Washington, D.C. 20014
October 6-11	Association of Interpretive Naturalists National meeting, Cape Cod Sea Camps, Massachusetts. Contact Dr. Bill Randall, Workshop/Conference Chairman, AIN 80, 15 State Street, Boston, Massachusetts 02109
Oct. 13-16	16th American Water Resources Conference, Minneapolis Radisson Hotel. Contact AWRA, St. Anthony Falls Hydraulics Laboratory, Mississippi River at 3rd Avenue, S.E., Minneapolis, Minnesota 55414
November 7	National Audubon Society Annual meeting, the New York Hilton, New York City. Contact Russell W. Peterson, President, 950 Third Avenue, New York, New York 1002
November 17-20	Coastal Zone 80, a conference on all aspects of Coastal Zone Management, Diplomat Hotel, Hollywood, Florida. Contact Billy L. Edge, Chairman, Coastal Zone 80, Department of Civil Engineering, Clemson University, Clemson, South Carolina 29631
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February 1-5	National Association of Conservation Districts Annual meeting, San Francisco, California. Contact Neil Sampson, Executive Vice President, Suite 1105, 1025 Vermont Avenue, N.W., Washington, D.C. 20005
February 9-13	Society for Range Management 34th Annual meeting, Mayo Hotel, Tulsa, Oklahoma. Contact Dr. Frank Thetford, Department of Agronomy, Oklahoma State University, Stillwater, Oklahoma 74074