

Anonymous. 1981. Developing strategies for rangeland management. A report prepared by the committee on developing strategies for rangeland management, Board on Agriculture and Renewable Resources, Commission on Natural Resources, National Research Council, Washington, DC. 91pp.

LOCATION: U.S.

KEYWORDS: LAND MANAGEMENT POLICY, FLPMA, INVENTORY, LAND USE PLANS.

ABSTRACT

The Federal Land Policy and Management Act of 1976 (FLPMA) established procedures for the development and protection of all lands in the public domain. Approximately 70 million ha (174 million acres) of such lands in the western United States are managed by the Bureau of Land Management (BLM) under principles of multiple use and sustained yield. BLM is required by FLPMA to make an inventory of the resources of these lands and to prepare comprehensive land use plans consistent with the management goals set forth in the act. In addition, BLM is required by the National Environmental Policy Act of 1969 to prepare environmental impact statements for major actions affecting the environment. The Bureau is now preparing these statements within their grazing management program.

Anonymous. 1982. The best management practices for the management and protection of western riparian stream ecosystems. Western Div. American Fisheries Society. 45pp.

LOCATION: WEST, U.S.

KEYWORDS: BEST MANAGEMENT PRACTICES

ABSTRACT

To provide guidelines applicable to riparian habitat fisheries, and water quality resources, the Western Division of the American Society has developed this paper listing Best Management Practices for the seven primary impacts of livestock grazing, mining, water development, irrigation, road construction, agriculture, urbanization, and timber harvest.

Almand, J.D., and W.B. Krohn. 1978. The position of the Bureau of Land Management on the protection and management of riparian ecosystems. Pages 359-361 in Strategies for Protection and Management of Floodplain Wetlands and Other Riparian Ecosystems. R.R. Johnson and J.F. McCormick, tech. coord. Proc. Symp. Dec. 11-13, 1978, Callaway Gardens, GA. U.S. Dep. Agric., For. Serv. Gen. Tech. Rep. WO-12 Wash. DC. 410pp.

LOCATION: U.S.

KEYWORDS: BLM POLICY

ABSTRACT

This paper discussed the Bureau of Land Management's policy and procedures for protection and management of riparian ecosystems. Past abuses of riparian habitats are recognized as are future opportunities for improved management. Recent legislative and executive mandates require land managers to protect the natural functions of riparian ecosystems. BLM is implementing a positive program to adequately protect and manage components of riparian ecosystems.

Anderson, B.W., and R.D. Ohmart. 1985. Managing vegetation and wildlife along the Colorado River: Synthesis of data, predictive models, and management. Pages 123-127 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AZ

KEYWORDS: PREDICTIVE MODELS, WILDLIFE

ABSTRACT

Predictive models were developed from data collected monthly on vegetation and wildlife for over seven years (1972-1979) in order to design wildlife enhancement projects. Implementation of projects was conducted between 1979-1981 to gain information on costs, develop methodologies on revegetation, and to test model-generated predictions.

Anderson, M.T. 1985. Riparian management of coastal Pacific ecosystems. Pages 364-368 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric., For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: OR

KEYWORDS: COASTAL ECOSYSTEMS, FOREST

ABSTRACT

The Siskiyou National Forest in Oregon manages riparian areas along the Pacific coast where high value conifers stand near streams bearing salmonid fisheries. Riparian areas are managed by setting objectives which allows for limited timber harvest along with stream protection. The annual timber sale quantity from the Forest is reduced by 13 percent to protect riparian areas and the fishery resource.

Apple, L.L. 1985. Riparian habitat restoration and beavers. Pages 489-490 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: WY

KEYWORDS: BEAVER, HABITAT RESTORATION

ABSTRACT

This study was partially designed to determine whether materials could be supplied to beavers in marginal habitats, with resulting habitat improvement. The study was expanded to determine if both beavers and materials could be successfully relocated to these areas. The results have been very promising as a means of stabilizing and improving degraded riparian habitats.

Armour, C.L. 1977. Effects of deteriorated range streams on trout. US Dep. Inter., Bur. Land Manage. Idaho State Office, Boise, Idaho. 7pp.

LOCATION: ID

KEYWORDS: GRAZING IMPACTS

ABSTRACT

Improper management of domestic livestock on western ranges has caused habitat degradation of trout streams in some areas. As a result, there is either less trout production or conditions have deteriorated to such a degree that the fish can not survive in the streams. To accommodate requirements of sportsmen for additional fishing opportunities and to achieve national objectives for better balance in managing resources, it is necessary for habitat degradation problems to be solved.

Avery, E.L. 1983. A bibliography of beaver, trout, wildlife, and forest relationships: With special references to beaver and trout. Tech. Bull. 137, Department of Natural Resources, P.O. Box 7921, Madison, WI 53707. 23pp.

LOCATION: U.S. and CANADA

KEYWORDS: BEAVER-TROUT RELATIONSHIPS, WATERFOWL, WILDLIFE, FORESTS

ABSTRACT

A total of 446 references to beaver (Castor canadensis) ecology and the relationships of beaver to trout, waterfowl and other wildlife, and forests are presented. Annotations of 36 papers selected from the general references deal specifically with the relationship of beaver and their activities to wild trout in low to moderately high gradient streams in Wisconsin (10), Michigan (9), Minnesota (10), New York (5), Maine (2), Massachusetts (1), and Ontario (1).

Bayha, K.D. 1985. Riparian ecosystems of Alaska. Pages 491-492 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AK

KEYWORDS: ALASKA RIPARIAN ECOSYSTEMS

ABSTRACT

The wide array of climatic conditions found in the Nation's largest state is illustrated by the equally wide variety of riparian ecosystems. As elsewhere, Alaska's riparian habitat are vital to a large variety of fish and wildlife species. Economic exploitation of natural resources also threatens Alaska's riparian ecosystems.

Behnke, R.J., and M. Zarn. 1976. Biology and Management of threatened and endangered western trouts. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-28, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 45pp.

LOCATION: WEST, U.S.

KEYWORDS: NATIVE TROUT

ABSTRACT

Discusses taxonomy, reasons for decline, life history and ecology, and suggestions for preservation and management of six closely related trouts native to western North America: Colorado River cutthroat, Salmo clarki pleuriticus; greenback trout, S. c. stomias; Lahontan cutthroat, S. c. henshawi; Paiute trout, S. c. seleniris; Gila trout, S. gilae; and Arizona native trout, S. apache. Meristic characters, distribution and status, habitat requirements and limiting factors, protective measures, and management recommendations are presented for each taxon.

Brehens-Tepper, J.C., J.T. O'Leary, and D.C. Andersen. 1985. Focused recreation use in riparian ecosystems: A taxonomy of user types. Pages 216-218. in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: IN

KEYWORDS: RECREATION

ABSTRACT

Using data from the 1980 National Survey of Fishing, Hunting, and Wildlife Associated Recreation, this paper examines Indiana anglers by amount of participation at rivers and streams, sociodemographic background and conservation activity involvement. Each of these factors appears to facilitate identification of different user types that should be considered in managing and planning riparian environments.

Bock, J.H., and C.E. Bock. 1985. Patterns of reproduction in Wright's Sycamore. Pages 493-494 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AZ

KEYWORDS: SYCAMORE, WRIGHT'S

ABSTRACT

In southeastern Arizona this tree produces large numbers of viable seeds that fall in a compact fruit shadow around parent individuals. Sexual reproduction usually fails due to drought or flash-flooding. Large numbers of seedlings and saplings grew in one site with permanent water and little flooding. Young trees grew in clumps, usually of similar-sized individuals, and away from mature tree canopy but always in the stream channel.

Brady, W., D.R. Patton, and J. Paxson. 1985. The development of southwestern riparian gallery forests. Pages 39-43. in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: SOUTHWESTERN U.S.

KEYWORDS: RIPARIAN GALLERY FORESTS, OVERFLOW CHANNELS, FLOODING, AGGRADATION

ABSTRACT

Riparian gallery forests along two rivers in the southwestern United States are described in a developmental continuum ranging from nursery bar to mature forest. Habitats suitable for tree reproduction are recognizable by their position relative to the active water course. These sites are typically located in overflow channels and receive flow only during floods. Flooding and the subsequent aggradation appear to be the major variables for the natural sequence of development within riparian stands.

Brook, J.H. 1985. Physical characteristics and pedogenesis of soils in riparian habitats along the upper Gila River Basin. Pages 49-53 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AZ

KEYWORDS: SOIL, PHYSICAL CHARACTERISTICS

ABSTRACT

Knowledge of soils in southwest riparian habitats is minimal. Soil profiles in the riparian zone on the Gila and San Francisco Rivers were studied. The soils that support trees can be classified as Torrifluvents or on the more stable sites as Haplustolls. Coarse textures and low water holding capacity are dominant characteristics.

Brunsfeld, S.J., and F.D. Johnson. 1985. Field guide to the willows of east-central Idaho. University of Idaho, Bull. 39, College of Forestry, Wildlife and Range Sciences. Moscow, Idaho 83843 95pp.

LOCATION: ID

KEYWORDS: WILLOW, WILLOW FIELD GUIDE

ABSTRACT

This guide describes the willows of the upper Salmon River drainage in east-central Idaho. This area of about 8,000 square miles extends from the headwaters of the Salmon River to the mouth of the Middle Fork, including the Yankee Fork, East Fork, Pahsimeroi River, Lemhi River, North Fork, Panther Creek and numerous smaller tributaries. Two isolated streams that are part of the Snake River watershed, Birch Creek and the Little Lost River, are included in the southeastern corner of the study area.

Bryant, L.D. 1985. Livestock management in the riparian ecosystem. Pages 285-289. in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: OR

KEYWORDS; PRODUCTION, GRAZING SYSTEMS

ABSTRACT

Intensive, long-term livestock grazing has occurred along most streams in the western United States. Although most livestock grazing on public lands is now under some form of management, many riparian areas are below "good" in ecologic condition, with forage production considerably below potential. Eight years of research at Meadow Creek, Starkey Experimental Forest and Range, Wallowa-Whitman National Forest, in northeastern Oregon, indicates that herbage production was increased 1- to 4-fold through timing and intensity of grazing. Rest-rotation, deferred rotation, and season-long grazing systems were tested. Although there were no statistically different changes in plant composition, the production of both graminoids and forbs increased dramatically.

Bryant, M.D. 1985. Changes 30 years after logging in large woody debris, and its use by salmonids. Pages 329-334 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AK, BC

KEYWORDS: WOODY DEBRIS, LOGGING STUDY, STREAM SALMONID, LOGGING IMPACT

ABSTRACT

Changes in large woody debris in fourth and fifth-order salmon streams with logged, unlogged, and partially logged riparian zones are documented from maps--for 1949 and 1960--and from field surveys done in 1983 and 1984. Over the 30-year period, most changes in the amount of large woody debris in the logged systems. During and immediately after logging large increases were noted, but in 1984 the amount of large woody debris in the logged systems was less than that observed before logging in most categories. Amounts of large woody debris in the other streams remained relatively stable. Thirty years after logging, habitat formed as a result of large debris provides important rearing areas for juvenile salmonids. Results from this study emphasize the importance of managing riparian zones as a source of large organic debris.

Buckhouse, J.C. 1985. Water and people: Common denominators in riparian zones. Pages 369-370 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: OR

KEYWORDS: PLANNING

ABSTRACT

Water can be allocated according to any number of approaches. People are harder to manage since they work from diverse social, psychological, economic, and aesthetic backgrounds. An approach which brings people together makes the most sense for multiple use management.

Christensen, K.M. 1985. The linear interval method for determining habitat selection of riparian wildlife species. Pages 101-104 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AZ

KEYWORDS: LINEAR INTERVAL, WILDLIFE, RIPARIAN HABITAT

ABSTRACT

Since this technique (originally developed for river otters) can be used in highly heterogeneous habitats, incorporates both categorical and continuous data, yields a physiognomic representation of habitat structure, and facilitates the use of multivariate statistics in data analysis, it is inherently superior to those techniques typically employed by wildlife ecologies in studies of habitat selection.

Cope, O.B. 1979. Grazing and riparian/stream ecosystems-A forum. Trout Unlimited Inc., Denver, Co. 94pp.

LOCATION: WESTERN U.S.

KEYWORDS: GRAZING IMPACTS, PUBLIC USERS, MANAGEMENT TECHNIQUES, RIPARIAN ENCLOSURES, FEDERAL LAND MANAGEMENT POLICY

ABSTRACT

21 papers, 94 pages discussing the impacts of livestock grazing on riparian areas and the solutions to the problem.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979.  
Classification of wetlands and deepwater habitats of the United States. Office of Biological Services, Fish and Wildl. Serv., U.S. Dep. Inter., Washington, DC. 20240. 103pp.

LOCATION: U.S.

KEYWORDS: WETLANDS CLASSIFICATION, DEEPWATER HABITATS, HYDROPHYTES, HYDRIC SOILS

AUTHOR ABBREVIATED ABSTRACT

This classification, to be used in a new inventory of wetlands and deepwater habitats of the United States, is intended to describe ecological taxa, arrange them in a system useful to resource managers, furnish units for mapping, and provide uniformity of concepts and terms. Wetlands are defined by plants (hydrophytes), soils (hydric soils), and frequency of flooding. Ecologically related areas of deep water, traditionally not considered wetlands, are included in the classification as deepwater habitats.

Cox, J.R., and H.L. Morton. 1985. Above-ground biomass quantities and livestock production at big sacaton riparian areas in southeastern Arizona. Pages 305-309 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: AZ

KEYWORDS: GRAZING, BIG SACATON BIOMASS

ABSTRACT

Two big sacaton (Sporobolus wrightii) grassland riparian sites were studied in southeastern Arizona. At site I we measured green biomass, dead standing and standing crops of big sacaton for 3 years. At site II we annually burned or mowed big sacaton pastures in February and annually grazed these pastures plus an untreated control pasture between 1 May and 15 July for three years. Green biomass peaked in August at 1300 and 3000 kg/ha in dry and wet years, respectively. Dead standing biomass accumulated in the fall and disappeared following either fall, winter or summer precipitation. Standing crop (green plus dead standing) was greatest in August and averaged 4400 kg/ha. Both burning and mowing reduced green biomass production. Stocking rates on burned and mowed pastures were only one-third as high as on untreated. Mean daily gains in 1981 and 1982 averaged 0.41 and 0.67 kg/day on untreated and treated pastures, respectively, but total gains per pasture were 512 and 235 kg on the untreated and treated, respectively.

Cross, S.P. 1985. Responses of small mammals to forest riparian perturbations. Pages 269-275 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523 p. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: OR

KEYWORDS: PERTURBATIONS, MAMMALS SMALL, FOREST

ABSTRACT

Trapping studies at several mixed conifer forest sites in southwestern Oregon demonstrate a differentially high use of riparian habitat by small mammals. Harsh perturbations of this habitat radically affect the presence and abundance of many species. Riparian leave-strips were found to support small-mammal communities comparable to undisturbed sites.

Crouse, M.R., and R.R. Kindschy. 1981. A method for predicting riparian vegetation potential of semiarid rangelands. Pages 110-116 in Acquisition and Utilization of Aquatic Habitat Inventory Information. Proceedings of a Symposium, October 28-30, 1981, Western Div. of Am. Fish Soc. Portland, OR 375pp.

LOCATION: OR

KEYWORDS: POTENTIAL VEGETATION

ABSTRACT

Predicting the potential of riparian areas to recover after protection from livestock is difficult because examples of pristine riparian communities have generally been destroyed by excessive grazing. This paper describes a method for predicting riparian site potential of streams and reservoirs in semiarid climates such as southeastern Oregon. The method is based on physical characteristics of stream and reservoir riparian zones, such as extent of water level fluctuation, persistence of flow, scouring, and soil type. These factors have been organized into keys for field use. Predicting the potential of riparian sites is essential to set priorities for the expenditure of funds to enhance and monitor those sites.

Cuplin, P. 1981. The use of large scale color infrared photography for stream habitat and riparian vegetation inventory. Tech. Note 325, US Dep. Inter., Bur. Land Manage., Bldg. 50, Denver Federal Center, Denver, CO., 80225, 7pp.

LOCATION: U.S.

KEYWORDS: STREAM HABITAT, INVENTORY, PHOTOGRAPHY INFRARED COLOR

ABSTRACT

A system of ground data sampling and photointerpretation of stream habitat and riparian vegetation is described. Ground data samples are the basis for photointerpretation and classification of stream habitat and riparian vegetation. Stream habitat is classified for each stream mile by condition class of poor, fair, good, or excellent. Riparian vegetation is classified by dominant and sub-dominant plant species, delineated, and number of acres calculated by using a dot grid or planimeter.

Cuplin, P. 1985. Riparian area inventory and monitoring using large scale color infrared photography. Pages 69-71 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: WESTERN U.S.

KEYWORDS: REMOTE SENSING, INVENTORY, MONITORING, AIRPHOTOS, PHOTOGRAPHY COLOR INFRARED

ABSTRACT

Variables that can be photointerpreted from large scale color infrared airphotos with ground data and used to monitor change in stream/riparian areas are stream width; floodplain width; stream channel stability; stream bank stability; stream shade; ground cover of trees, shrubs, and herbaceous vegetation; bare soil; riparian area and width; and density and structure of large trees and shrubs.

Cuplin, P., W.S. Platts, O. Casey, and R. Masinton. 1985. A comparison of riparian area ground data with large scale airphoto interpretation. Pages 67-68 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: NV

KEYWORDS: REMOTE SENSING, AIRPHOTOS SCALE LARGE, AIRPHOTO INTERPRETATION

ABSTRACT

A study site on Tabor Creek in northeast Nevada has been monitored by ground data collection each year since 1979. Airphotos of the study site were acquired in large scale (1:2,000 color) infrared 9- x 9-inch format during July 1984. Ground data and airphoto interpretation are compared.

Dahlem, E.A. 1979. The Mahogany Creek watershed--With and without grazing. Pages 31-34 in O.B. Cope. ed. Grazing and Riparian/Stream Ecosystems: Proceedings of the Forum. Trout Unlimited Inc., Denver, CO. 94pp.

LOCATION: NV

KEYWORDS: LIVESTOCK GRAZING, LIVESTOCK EXCLUSION, HABITAT IMPROVEMENT

REVIEWER'S ABSTRACT

The attraction that riparian areas have for domestic livestock has long been noted by wildlife biologists and livestock managers. The high moisture content of riparian vegetation makes it extremely palatable to livestock, especially in summer when surrounding rangelands are desiccated. The tendency for livestock, especially cattle, to congregate along riparian areas is reinforced by the fact that, in mountainous areas, streams are often located in narrow canyons with steep slopes on both sides. These factors invariably lead to overgrazing and abuse of riparian areas. Such as the case along Mahogany Creek and its watershed, located in northwest Humboldt County, Nevada. The reduction in livestock grazing, but continued annual use, had little beneficial effect on riparian habitat along Mahogany Creek. Only after complete removal of livestock use by fencing was significant riparian habitat improvement accomplished along Mahogany Creek.

DeBano, L.F., J.J. Brejda, and J.H. Brock. 1984. Enhancement of riparian vegetation following shrub control in Arizona chaparral. in J. of Soil and Water Cons. 39(5)317-320.

LOCATION: AZ

KEYWORDS: CHAPARRAL, SHRUB CONTROL

ABSTRACT

The effect of upstream shrub control on the establishment of riparian vegetation was evaluated on a chaparral watershed in central Arizona. After 20 years of increased streamflow and longer duration streamflow, a riparian zone below the watershed treated for shrub control had 7 riparian plants per 100 m<sup>2</sup> compared with the nearby, untreated watershed that had 2.3 plants per 100 m<sup>2</sup>. The increase in riparian vegetation has implications for water quality, wildlife, and water use.

DeByle, N.V., and R.P. Winokur, editors. 1985. Aspen: Ecology and management in the western United States. US For. Serv. Gen. Tech. Rep. RM-119, 283pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: U.S. and CANADA

KEYWORDS: ASPEN, ASPEN FOREST TYPE

ABSTRACT

Information about the biology, ecology, and management of quaking aspen on the mountains and plateaus of the interior western United States, and to a lesser extent, Canada is summarized and discussed. The biology of aspen as a tree species, community relationships in the aspen ecosystem, environments, and factors affecting aspen forests are reviewed. The resources available within and from the aspen forest type, and their past and potential uses are examined. Silvicultural methods and other approaches to managing aspen for various resources and uses are presented.

Dickson, J.G., and J.C. Huntley. 1985. Streamside management zones and wildlife in the southern coastal plain. Pages 263-264 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: TX

KEYWORDS: STREAMSIDE MANAGEMENT, VEGETATION COMPOSITION

ABSTRACT

We are assessing the impacts of presence and vegetative composition of Streamside Management Zones (SMZ) on squirrels, deer, furbearers, small mammals, birds, reptiles, and amphibians. Preliminary results for squirrels show gray and fox squirrels were abundant in the wide SMZ, but virtually absent from medium and narrow SMZ.

Dileanis, P.D., F.A. Branson, and S.K. Sorenson. 1985. Methods for determining effects of controlled dewatering of shallow aquifers on desert phreatophytes on Owens Valley, California. Pages 197-200 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: CA

KEYWORDS: PHREATOPHYTES, DEWATERING

ABSTRACT

The ability of phreatophytic plants to tolerate and survive dewatering of shallow aquifers is being tested. At test sites that have been equipped with pumping wells, soil moisture and plant physiological responses are being measured as water levels decline.

Disano, J., B.W. Anderson, J.K. Meents, and R.D. Ohmart. 1984.  
Compatibility of biofuel production with wildlife habitat  
enhancement. Pages 739-743 in California Riparian Systems:  
Ecology, Conservation, and Productive Management. Warner, R.E. and  
K. Hendrix, eds. University of California Press. Berkeley, CA.  
1035pp.

LOCATION: CA

KEYWORDS: WILDLIFE HABITAT ENHANCEMENT, BIOFUEL PRODUCTION

ABSTRACT

A stand of native cottonwood trees (Populus fremontii) with hedges of quail bush (Atriplex lentiformis) would attract high avian densities and diversities. Densities and diversities of birds and rodents reached above-average levels for riparian vegetation in the lower Colorado River valley within two years from planting on two experimental plots and within one year on a third plot. The rapid growth rate of native trees and the acceptance of revegetated areas by wildlife, in conjunction with the current demand for wood as fuel, suggests that the two objectives are compatible and the latter can be economically productive.

Dobson, A.T. 1973. Changes in the structure of a riparian community as the result of grazing. Pages 58-64 in Proceedings of the New Zealand Ecological Society. Vol. 20

LOCATION: NEW ZEALAND

KEYWORDS: GRAZING IMPACT, RIPARIAN COMMUNITY STRUCTURE

ABSTRACT

This describes changes due to grazing that occurred in the vegetation and topography of a previously ungrazed, riparian site. Grazing made the site more susceptible to erosion by eliminating the main pioneer species. Phalaris arundinacea, a rhizomatous reed grass.

Duell, L.F., Jr., and D.M. Nork. 1985. Comparison of three micro-meteorological methods to calculate evapotranspiration in Owens Valley California. Pages 161-165 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: CA

KEYWORDS: EVAPOTRANSPIRATION, OWENS VALLEY, MICROMETEOROLOGICAL

ABSTRACT

Using the Bowen ratio/energy-budget, eddy-correlation, and Penman combination methods, 24-hour evapotranspiration values, in millimeters per day, were 6.1, 6.0, and 21.7 for a salt grass site in May 1984; 1.2, 2.0, and 12.3 for a greasewood site in June 1984; and 1.6, 2.2, and 10.4 for a rabbitbrush site in July 1984.

Duff, D.A., and J.L. Cooper. 1976. Techniques for conducting stream habitat surveys on National Resource Land. US Dep. Inter., Bur. Land Manage. Tech. Note 283, Bldg. 50, Federal Center, Denver, CO 80225. 73pp.

LOCATION: U.S.

KEYWORDS: STREAM SURVEY

ABSTRACT

This technical note provides guidance and standards for conducting certain types of aquatic habitat surveys on national resource lands administered by the Bureau of Land Management. The objectives are to provide adequate procedures designed to evaluate most of the common environmental conditions that limit aquatic habitat and fish production and to assure that aquatic habitat resources, including water quality, is given adequate consideration in the management of resources on national resource lands.

Duff, D.A. 1979. Riparian habitat recovery on Big Creek, Rich County, Utah--A summary of 8 years of study. Pages 91-92 in Cope, O.B. ed. Grazing and Riparian/Stream Ecosystems: Proceedings of the Forum. Trout Unlimited Inc., Denver, CO. 94pp.

LOCATION: UT

KEYWORDS: STREAM EXCLOSURE, LIVESTOCK GRAZING, GRAZING IMPACTS

ABSTRACT

In 1970 the Bureau of Land Management constructed a 0.4-km (0.25 mi) riparian zone exclosure, fencing off 1,006 meters (3,300 ft) of stream channel from livestock use on Big Creek, Rich County, Utah, to monitor the recovery of riparian habitat from livestock-grazing impacts. Seventeen stream improvement structures were placed in the stream inside the exclosure in 1970 and an additional 26 structures were placed inside and outside the exclosure in 1971 to help accelerate recovery of badly eroded streambank soil conditions, as well as improve pool quality for resident fisheries. Habitat studies from 1973 to 1978 have shown the habitat inside the exclosure to recover significantly from rest, while areas outside the exclosure continue to decline as a result of continued livestock use.

Elder, R.G., and R.C. Moore. 1985. Impacts of oil and gas development on riparian zones in the overthrust belt: The role of industrial siting. Pages 379-383 in Riparian Ecosystems and Their Management: Reconciling Conflicting Uses. Proceedings of the Symposium. US Dep. Agric. For. Serv. Gen. Tech. Rep. RM-120, 523pp. Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

LOCATION: WY

KEYWORDS: OIL AND GAS DEVELOPMENT, OVERTHRUST BELT, INDUSTRIAL SITING

ABSTRACT

As oil and gas development in the Overthrust Belt of Wyoming expands, the need to minimize impacts to riparian systems becomes increasingly important. However, regulatory control is sometimes ineffectual. Because of its broad powers, the Industrial Siting process can play a key role in mitigating environmental impacts that are otherwise unregulated.

England, A.S., L.D. Foreman, and W.F. Laudenslayer, Jr. 1984.  
Composition and abundance of bird populations in riparian systems of  
the California deserts. Pages 694-705 in Warner, R.E. and K.M.  
Hendrix eds. California Riparian Systems: Ecology, Conservation,  
and Productive Management. University of California Press, Berkeley,  
CA.

LOCATION: CA

KEYWORDS: BIRD POPULATIONS, DESERTS

ABSTRACT

Avian population diversity, density, and species richness in  
desert riparian systems were analyzed using 73 breeding bird surveys,  
62 winter bird-population studies, and biweekly surveys at 15 sites.  
Breeding bird surveys indicated that cottonwood/willow  
vegetation-types had the highest number of breeding and visiting  
species and the highest bird diversity among desert  
vegetation-types. Willow had the highest bird density. Winter  
bird-population studies showed that cottonwood/willow also had the  
species richness and diversity during winter, but palm and palo  
verde/ironwood had higher bird densities. All population variables  
were higher in desert riparian systems than in non-riparian desert  
vegetation-types during winter and breeding seasons.

Fenner, P., W.W. Brady, and D.R. Patton. 1984. Observations on seeds and  
seedlings of Fremont Cottonwood. Desert Plants 6(1):55-58.

LOCATION: AZ

KEYWORDS: COTTONWOOD, SEED GERMINATION

ABSTRACT

The seeds of Fremont Cottonwood (Populus fremontii) lose  
viability within 1 to 5 weeks after dispersal. Moisture stress  
induced by osmotic solutions stronger than six atmospheres both  
delayed and reduced total germination. Root growth rates of young  
seedlings averaged 6 mm per day. Because of the limited time of seed  
viability, a suitable substrate for germination must occur at or soon  
after seed dispersal. Moist conditions must persist until seedling  
roots grow to depths where moisture is more constantly available than  
near the surface.