

Introduction to the CNGA California Native Grass and Grassland Management Bibliography

Historical Works of California Native Grasses and Grassland Management

by David Amme

Research and appreciation of California's native grasses and grasslands has been a long time coming. The earliest work on native grasses was from the point of view of the natural revegetation of depleted or overgrazed mountain meadows and rangeland of the west by Arthur Sampson who wrote several reports for the U.S. Forest Service under the guidance of Gifford Pinchot in the early 1900s. Soon after these publications Sampson became an Associate Professor of Forestry and Plant Ecology at U.C. Berkeley. In 1919 Sampson wrote *Plant Succession in Relation to Range Management*, a classic "Clementian" analysis of native perennial grasses and forbs filled with scale illustrations of their root system profiles. In 1923 Sampson wrote one of the first text books on western range management—*Range and Pasture Management*, followed in 1923 by one of the first texts on native forage plants—*Native American Forage Plants*. Sampson wrote his classic text in range management in 1952—*Range Management Principles and Practices*. In the 1930's Sampson contributed to several research papers in *Hilgardia* published by California's first Agricultural Experiment Station at Oxford Tract in Berkeley. One of *Hilgardia's* most famous issues on California native grasses—*Distribution of the Native Grasses of California*, was written in 1947 by Alan Beetle, professor of Agronomy in the Experiment Station and one of Sampson's close colleagues. Sampson continued to write many articles, bulletins and circulars for the budding Agricultural Experiment Station which evolved into the California Agricultural Extension Service.

More focused research on California native grasses and grassland management did not appear until the mid 1940's starting with the research of Merton Love, Burle Jones, and others centered at the U.C. Extensions in Davis, California. Today, the articles and circulars of this era are difficult to find and reside only in a handful of libraries in the state. The work on California native grasses begun in the 1940s and 50s was basically usurped by introduced perennial grasses with emphasis on forage production and range fertilization in the 1960s and 70s. By this time California's grassland was firmly considered an annual grassland and native perennial grasses were given scant attention. The first publication devoted to native grasses appeared in the April 1981 issue of the California Native Plant Society's journal, *Fremontia*. Interest in California's native grasses gradually increased in the 1980s finally giving birth to the California Native Grass Association in 1991. Native perennial grasses that were once produced in the 1940s did not return into production until almost fifty years later.

The following bibliography chronologically charts important research and papers on California's native grasses and grassland management from the earliest papers by Sampson to the present. As an educational service to our membership, CNGA is reproducing many of the earlier, historical out-of-print articles and papers in the style they were originally written. Gradually, the bibliography will expand, as will the number of reproduced papers, presenting important earlier papers as well as recent papers devoted to California native grasses and grassland management.

- Sampson, A.W. 1908. The revegetation of overgrazed range areas, preliminary report. U.S. Dept. of Agr., For. Service. Circular 158. 21 pp.
- Sampson, A.W. 1909. Natural revegetation of depleted mountain grazing lands, progress report. U.S. Dept. of Agr., For. Service. Circular 158. 28 pp.
- Sampson, A.W. 1919. Plant succession in relation to range management. Bul 791. U.S. Dept. of Agri., Washington, D.C. 76 pp.
- Sampson, A.W. 1923. Range and pasture management. John Wiley and Sons, Inc. New York 421 pp.
- Sampson, A.W. 1924. Native American forage plants. John Wiley and Sons, Inc. 435 pp.
- Sampson, A.W. and E.C. McCarty. 1930. The carbohydrate metabolism of *Stipa pulchra*. *Hilgardia*. 5(4):61-100.
- Sinclair, J.D. and A.W. Sampson. 1931. Establishment and succession of vegetation on different soil horizons. *Hilgardia*. 5(7):155-174
- Parker, K.W. and A.W. Sampson. 1931. Growth and yield of certain gramineae as influenced by reduction of photosynthetic tissue. *Hilgardia*. 5(10):361-381.
- Gordon, A. and A.W. Sampson. 1939. Composition of common California foothill plants as a factor in range management. Bul. 627. University of Calif. Agric. Exp. Sta., Berkeley, CA. 95 pp.
- Love, M.R. 1944. Preliminary trials on the effect of management on the establishment of perennial grasses and legumes at Davis. Journal of the American Society of Agronomy, Vol. 36:699-703.
- Jones, B.J. and R.M. Love. 1945. Improving California ranges. Calif. Agric. Ext. Service Circular 129. College of Agriculture, U.C. Berkeley. 48 pp.
- Jones, B.J. and J.B. Brown. 1947. Irrigated pastures in California. Calif. Agric. Extension Service Circular 125. 48 pp.
- Beetle, Alan. 1947. Distribution of the native grasses of California. *Hilgardia*. 17(9):309-357.
- Love, R.M. 1948. Eight new forage plants developed for California ranges. California Agriculture. 2(1).
- Jones, Burle J. 1948. California oatgrass. *Pacific Stockman*. 14(6).

- Laude, H.M. 1949. Delayed germination of California oatgrass, *Danthonia californica*. Agronomy Journal, Vol. 41, 404-408.
- Lemmon, P.E., A.L. Hafenrichter, B. A. Madson. 1950. Cucamonga brome, a new grass for covercropping. Calif. Agric. Exp. Sta., College of Agriculture, U.C. Berkeley. Circular 401. 7 pp.
- Huffaker, C.B. 1951. The return of native perennial bunchgrass following the removal of Klamath weed (*Hypericum perforatum* L.) by imported beetles. Ecology, 32:443-458.
- Love, R.M. 1951. Range grass reseeding experiments in California. California Agriculture. 5(1).
- Sampson, A.W., A. Chase, and D.W. Hendrick. 1951. California grassland and range forage grasses. Calif. Agric. Exp. Sta. Bul. 724. 130 pp.
- Sampson, A.W. 1952. Range management principles and practices. John Wiley and Sons, Inc., New York. 570 pp.
- Biswell, H.H. 1956. Ecology of California grasslands. Journal of Range Management, 9:19-24.
- Heady, H.F. 1956. Evaluation and measurement of the California annual type. Journal of Range Management, 9:25-27.
- Heady, H.F. 1956. Changes in a California annual plant community induced by manipulation of natural mulch. Ecology, 37:798-812.
- Burcham, L.T. 1957. California range land; an historico-ecological study of the range resource of California. Calif. Dept. of Natural Resources, Div. of Forestry, Sacramento. 261 pp.
- Green, L.R. and J.R. Bentley. 1957. Seeding and grazing trials of *Stipa* on foothill ranges. For. Res. Notes, Calif. For. Range Exp. Sta., U.S.D.A. For. Serv. 7 pp.
- Heady, H.F. 1958. Vegetational changes in the California annual type. Ecology, 39:402-416.
- Murphy, A.H. and D. Turner. 1959. A study on the germination of medusa-head seed. The Bulletin. California Dept. of Agric., Vol. XLVIII(1). 10 pp.
- Cooper, D.W. 1960. Fort Baker ranges return to champagne grasses. Journal of Range Management, 13: 203-205.
- Major, J., C.M. McKell, and L.J. Berry. 1960. Improvement of medusahead-infested rangeland. Calif. Agric. Expt. Sta. and Ext. Serv. Leaf. 123. 3 pp.
- Miller, H.W. 1963. Cucamonga California bromegrass. Crop Science.

- Woolfolk, E.J. and J.N. Reppert. 1963. Then and now: changes in California annual-type range vegetation. U.S. Forest Service Research Notes. PSW-N24. U.S.D.A. Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, CA. 9 pp.
- Dobrenz, A.K. and A.A. Beetle. 1966. Cleistogenes in *Danthonia*. Journal of Range Management Vol. 19:292-296.
- Major, J. and W.T. Pyott, 1966. Buried viable seeds in two California bunchgrass sites and their bearing on the definition of a flora, Vegetatio, 13:253-282.
- Raguse, C.A., Berry, L.J. and J.E. Street. 1967. Irrigated pastures in California. Circular 545. Calif. Agric. Exp. Sta. Extension Service. 35 pp.
- White, K.L. 1967. Native bunchgrass *Stipa pulchra* on Hastings Reservation, California. Ecology, 48(6):950-955.
- Robinson, R.H. 1968. An analysis of ecological factors limiting the distribution of a group of *Stipa pulchra* associations within the foothill woodland of California. Ph./D. Thesis, University of Oklahoma.
- Young, J.A., R.A. Evans, and B.L. Kay. 1973. Temperature requirements for seed germination in an annual-type rangeland community. Agron. Jour., 65:656-659.
- Barry, W.J. 1972. California prairie ecosystems. Vol. I: The central valley prairie, Sacramento, State of California Resources Agency, Dept. of Parks and Recreation.
- Baker, H.G. 1978. Invasion and replacement in California and neotropical grasslands. In Wilson, J.R., (ed.), Plant Relations in Pastures, pp. 368-384. Melbourne, Australia, CSIRO.
- Heady, H.F. 1977. Valley grassland. In Barbour, M.F. and Major, J., (eds.) Terrestrial Vegetation of California, New York, John Wiley & Sons, Inc., pp 491-514.
- Heady, H.F., T.C. Foin, M.M. Hektner, D.W. Taylor, M.G. Barbour, and W.J. Bary. 1977. Coastal prairie and northern coastal scrub. In Barbour, M.F. and Major, J., (eds.) Terrestrial Vegetation of California, New York, John Wiley & Sons, Inc., pp 733-760.
- Hektner, M.M. and T.C. Foin. 1977. Vegetation analysis of a northern California coastal prairie: Sea Ranch, Sonoma County, California. Madrono, 24:83-103.
- Hull, J.C. and C.H. Muller. 1977. The potential for dominance by *Stipa pulchra* in a California grassland. American Midland Naturalist. 97:147-175.
- Savelle, G.D. 1977. Comparative structure and function in a California annual and native bunchgrass community, Berkeley. Ph.D. Dis. University of California.

- Bartolome, J.W. 1979. Germination and seedling establishment in California annual grassland, *Journal of Ecology*, 67:273-281.
- Barry, J.W. 1981. Jepson prairie - will it be preserved? *Fremontia*, 9(1):7-11.
- Bartolome, J.W. and B. Gemmill. 1981. The ecological status of *Stipa pulchra* (Poaceae) in California. *Madrono*, 28:172-184.
- Bartolome, J.W. 1981. *Stipa pulchra*, a survivor from the pristine prairie. *Fremontia*, 9(1):3-6.
- Griggs, T. 1981. Life histories of vernal pool annual grasses. *Fremontia*, 9(1):14-17.
- Howard, A. 1981. Native grasslands endangered at Hungry Valley. *Fremontia*, 9(1):12.
- McClaran, M. P., 1981. Propagating native perennial grasses. *Fremontia*, 9(1):21-23.
- Rogers, D. 1981. Notes on planting and maintenance of bunchgrasses. *Fremontia*, 9(1):24-28.
- Kay, B.L., R.M. Love, and R.D. Slayback. 1981. Discussion: revegetation with native grasses: I. a disappointing history. *Fremontia*, 9(3):11-15.
- McClaran, M.P. and J.W. Bartolome: 1981. Discussion: revegetation with native grasses: II. A promising future. *Fremontia*, 9(3):14-15.
- Ahmed, E.O. 1983. Fire ecology of *Stipa pulchra* in California annual grassland. Ph.D. Diss., Univ. of California, Davis.
- Adams, T.E. and B.L. Kay. 1985. Phalaris, orchardgrass, fescue and selected minor grasses. Part I. Perennial grasses for California rangelands. In Proc. 38th Ann. Meeting Soc. for Range Management:128-132.
- Amme, D. 1985. Nursery production of western native perennial grasses for site stabilization. Proceedings of Conf. XVI International Erosion Control Assoc., San Francisco, CA.
- Jackson, L.E. 1985. Ecological origins of California's Mediterranean grasses. *Journal of Biogeography*, 12:349-361.
- Fuller, T. C., and G. Douglas Barbe. 1985. The Bradley method of eliminating exotic plants from natural reserves. *Fremontia*, 13(2):24-25.
- George, M.R. and M.B. Jones. 1985. Fertilization of nonseeded annual grassland, Univ. Calif., Davis, Range Sci. Rep. No.2.
- Foin, T.C. and M.M. Hektner. 1986. Secondary succession and the fate of native species in a California coastal prairie community, *Madroño*, 33:189-206

- Bartolome, J.W., S.E. Klukert, and W.J. Barry. 1986. Opal phytoliths as evidence for displacement of native grasslands. *Madroño* 33:217-222.
- Amme D., and B.M. Pitschel. 1989. Restoration and management of California's grassland habitats. Society for Ecological Restoration and Management Annual Meeting; January 16-20, 1989, Oakland, California. 8 pp.
- Dennis, A. 1989. Effects of defoliation on there native perennial grasses in the California annual grassland. Ph.D. Dissertation. U.C. Berkeley
- Lidicker, W.Z. 1989. Impacts of non-domesticated vertebrates on California grasslands. In Huenneke, L.F. and Mooney, H.A. eds. *Grassland structure and function: California annual grassland*. Kluwer Academic Publishers, Boston. 135-150.
- Menke, J.W. 1989. Management controls on productivity. In Huenneke, L.F. and Mooney, H.A. eds. *Grassland structure and function: California annual grassland*. Kluwer Academic Publishers, Boston. 173-199.
- Menke, J.W. 1992. Grazing and fire management for native perennial grass restoration in California grasslands. *Fremontia*, 20(2):22-25.
- Edwards, S.W. 1995. Notes on grazing and native plants in central California. *The Four Seasons* 10:61-67.
- Huntsinger, L.H., M.P. McClaran, A. Dennis, and J.W. Bartolome. 1996. Defoliation response and growth of *Nassella pulchra* (A. Hitchc.) Barkworth from serpentine and non-serpentine populations. *Madrono* 43:46-57.
- Stromberg, M.R. and J.R. Griffin. 1996. Long-term patterns in coastal California grasslands in relation to cultivation, gophers, and grazing. *Ecological Applications* 6:1189-1211.
- D.A. Hatch, J.W. Bartolome, J.S. Fehmi, and D.S. Hillyard. 1999. Effects of burning and grazing on a coastal California grassland. *Restoratoion Ecology* 7(4):376-381.
- D'Antonio, C., S. Bainbridge, C. Kennedy, J. Bartolome, and S. Reynolds. 2000. Ecology and restoration of California grasslands with special emphasis on the influence of fire and grazing on native grassland species. Paper. Department of Integrative Biology, U.C. Berkeley, CA. Funded by David and Lucile Packard Foundation. 99 pp.
- Stromberg, M.R., P. Kephart, and V. Yadon. 2001. Compostion, invisibility, and diversity in coastal California grasslands. *Madroño* 48(4):236-252.
- Hayes, G.F. and K.D. Holl. 2003. Cattle grazing impacts on annual forbs and vegetation composition of mesic grasslands in California. *Conservation Biology* 17(6):1694-1702.

Hayes, G.F. and K.D. Holl. 2003. Site-specific responses of native and exotic species to disturbances in a mesic grassland community. *Applied Vegetation Science* 6:235-244.