

CLIFF WALLIS, P. BIOL. SUMMARY

Cliff Wallis is a Professional Biologist, registered in the province of Alberta, who has 50 years' experience coordinating and undertaking biological surveys since the late 1960s. Cliff graduated from the University of Calgary in 1972 with a B.Sc. (with distinction) in Botany and Zoology. After working with Alberta Parks conducting biophysical inventories and planning parks, he established Cottonwood Consultants Ltd. in 1978. He has a diverse background in protected area systems planning, tourism projects, ecological studies, species at risk evaluations, environmentally significant features identification, protected area planning, environmental assessment, ecological restoration and interpretive planning. He has published numerous consulting and government reports as well as several articles in scientific and popular journals. Cliff holds an Authenticating Wetland Professional designation related primarily to Alberta's Wetland Policy in the field of wetland science.

Cliff has worked in a variety of Canada's Ecozones including the Boreal Shield, Taiga Shield, Taiga Plains, Prairies, Northern Arctic and Montane Cordillera and internationally in the grasslands of Inner Mongolia, the deciduous woodlands of Chongqing in SW China and the tropical and montane forests of Cameroon. He is conversant with vegetation, physical features, and wildlife identification and evaluation. Cliff coordinated or assisted on most of the environmentally significant area studies done to date in southern Alberta as well as a provincial overview. He conducted a variety of field studies on vascular and non-vascular plants, fish, amphibians, reptiles, birds and mammals, as well as on-line literature searches and extensive searches of archival material in government files, museums and universities.

Cliff has conducted field work and provided expert testimony to regulatory bodies on transmission lines, solar and wind farms, highways, pipelines, coal mining, natural gas fields, and dams. He worked on projects which have integrated protection and development of sensitive biophysical resources, including species at risk. He provided expert opinion to the Alberta Utilities Commission for transmission line, solar, and wind power projects; to the Alberta Energy Regulator (and its predecessors) for gas and oil projects; and to the Alberta Court of Queen's Bench in Edmonton related to pipelines and Environmentally Significant Areas.

Cliff served on the Alberta Caribou Committee, including its Research Subcommittee, from 2005-2012, providing advice on woodland caribou recovery planning to the Deputy Minister of Alberta Sustainable Resource Development. He was an environmental sector representative on the Standard Development Group for the 2019 Forest Stewardship Council National Forest Standard for Canada. He serves on the boards of the Milk River Management Society, Alberta Wilderness Association and Forest Stewardship Council (Canada) in addition to chairing the steering committee of the Great Plains Conservation Network. He currently serves on the task force making recommendations to Alberta's Minister of Environment and Parks regarding caribou and sub-regional planning in northwestern Alberta.

Of particular note are Cliff's involvement with hundreds of species at risk studies and status assessments in the Grasslands, Foothills, Mountains, Boreal Forest and Aspen Parkland; environmental assessment of the Trans-Canada Highway Twinning in Banff National Park; conservation analyses in western North America, including SW Alberta and its Montane Natural Subregion; field surveys of 1000s of wetlands in Alberta; numerous ecological land classifications and environmentally significant areas studies in Alberta (including the Calgary area) and BC; constraints analyses for energy developments; monitoring pipeline construction and vegetation restoration; capacity building for nature reserve managers in Inner Mongolia; and providing training on monitoring, environmental assessment and biodiversity protection, including species at risk, for the City of Chongqing in southwest China.

Species at Risk: Rare Plants of the Boreal Forest, Parkland, and Grassland; Trans-Canada Highway Twinning -- Banff National Park; Piping Plover; National Historic Sites; Rare Plants Monitoring, Oldman River Region; Rare Plants and Wildlife of Sand Hills; Western Blue Flag; Daishowa FMA; Foothills Grassland; Onefour; PFRA Pastures; Wainwright Dunes; numerous subdivision applications, Calgary; City of Chongqing, Alberta Caribou Committee

- field surveys to identify and monitor rare plant and wildlife habitats, population size, and management problems; literature surveys to determine status; includes surveys and analysis as part of environmental assessment of development projects; workshops on approaches to species at risk management; advocacy for species at risk protection

Significant Features Analyses: Many Springs; Saskatoon Mountain; Coal Valley; Calgary Region; Oldman River Region (including Crowsnest Pass and M.D. of Pincher Creek); Red Deer Region; Palliser Region; Southeast Region; David Thompson; Lloydminster; Bow-Canmore Corridor; County of Newell; M.D. of Kneehill; Foothills Model Forest

- field/literature studies to determine significant landscape, fish, wildlife and vegetation features—Aspen Parkland, Boreal Forest, Grasslands, Rocky Mountains, Foothills

Resource Management Planning/Environmental Impact Assessment: Battle Lake; Beauvais Lake, Dinosaur and Cypress Hills; Dalinor Nature Reserve, Inner Mongolia; Trans-Canada Highway Twinning; Medicine Hat/Hatton; Suffield Shallow Gas; Access Pipeline

- collection and analysis of data for protected area management and environmental impact assessment of developments; participatory approaches to planning; training of protected area managers; appearance before regulatory boards and Court of Queen's Bench

Restoration (Reclamation) Planning and Implementation: Ross Creek; Pointe-aux-Pins Creek; Coal Valley; Milk River Canyon; Dinosaur Provincial Park; Norman Wells

- field studies and literature review; field implementation (site preparation; planting, monitoring) for coal, pipeline, and oil and gas developments

Systems Planning: Grasslands; Aspen Parkland; Red Deer River Corridor; and Southwestern Alberta Montane and River Valleys; Provincial Parks System

- literature/field studies to determine park potential and to analyze theme representation

Ecological/Biophysical Inventories: Kootenay Plains; Kazan Upland; Milk River; Bow Valley; Saskatoon Island; Young's Point; Coal Valley; Grizzly Ridge; Shepard Drainage; Lakeland, Yoho National Park; Waterton Lakes National Park, Frank Lake, Bearspaw, Edworthy; includes surveys and analysis as part of environmental assessment of development projects

- field studies of wetlands, wildlife, vegetation, and landscapes

Regulatory Processes: Alberta Utilities Commission on transmission line, substation, solar and wind projects; Energy Resources Conservation Board/AEUB on coal, shallow gas and coalbed methane projects; FEARO on Oldman River Dam and Pine Coulee Dam Project (joint review panel with NRCB), Express Pipeline (joint hearing with National Energy Board) and Suffield Encana Shallow Gas project (joint hearing with Energy Resources Conservation Board and CEAA); Court of Queen's Bench regarding Corridor Pipelines and ESAs; Surface Rights Board for Komant Property--Enbridge Woodlands Pipeline; and Bashaw Sour Oil and Pembina Pipeline projects (Alberta Energy Regulator)

- provided expert testimony on environmental impacts and managed expert panels

CLIFF WALLIS SELECTED PUBLICATIONS

- Pinel, H. & C. Wallis. 1972. A botanical investigation in the Drumheller area. *Blue Jay* 30: 169-194.
- Kondla, N., H. Pinel, C. Wallis, & C. Wershler. 1973. Avifauna of the Drumheller area, Alberta. *Canadian Field-Naturalist* 87: 377-393.
- Wallis, C. & K. Van Tighem. 1973. Young's Point-ecological survey. Alberta Parks Division, Edmonton.
- Wallis, C. 1976. Milk River Canyon resource evaluation. Alberta Parks Division, Edmonton.
- Wallis, C. and C. Wershler. 1978. Coal Valley wildlife monitoring program-1978 study. Luscar Ltd. Edmonton.
- Wallis, C. and C. Wershler. 1979. Milk River Canyon: high plains survivor. *Nature Canada* 8: 36-45.
- Wallis, C. and C. Wershler. 1981. 1980 Coal Valley Mine--wildlife monitoring program and habitat reclamation review. Luscar Ltd. Edmonton.
- Wallis, C. & C. Wershler. 1981. Natural history inventory & assessment in the Many Springs area, Bow Valley Park. Alberta Energy & Natural Resources, Fish & Wildlife Division, Calgary.
- Wallis, C. 1982. An overview of the Mixed Grasslands of North America. Pages 195-208 in *Grassland ecology & classification symposium proceedings*. B.C. Ministry of Forests Publication R28- 82060.
- Wallis, C. & C. Wershler. 1984. Kazan Upland Resource Assessment for ecological reserves planning in Alberta. Alberta Energy & Natural Resources Report T/54, Natural Areas Technical Report No. 12. Public Lands Division, Edmonton.
- Wallis, C., C. Bradley, M. Fairbarns, J. Packer & C. Wershler. 1986. Pilot rare plant monitoring program in the Oldman Regional Plan area of southwestern Alberta. Alberta Forestry Lands & Wildlife Technical Report T/148.
- Wallis, C. and L. Allen. 1987. Assessment and monitoring of rare plants in Alberta, Canada. Pages 579-586 in "Conservation and management of rare and endangered plants, proceedings of a California conference on the conservation and management of rare and endangered plants". California Native Plant Society, Sacramento, California.
- Cottonwood Consultants Ltd. 1987-89. Environmentally Significant Areas in the Oldman River Region (7 Counties and MDs). Resource Evaluation and Planning, Alberta Forestry, Lands and Wildlife.
- Wallis, C.A. 1987. Critical, threatened and endangered habitats in Alberta, pp. 49-63, in, *Proceedings of the workshop on endangered species in the prairie provinces* by Geoffrey L. Holroyd et al. Provincial Museum of Alberta Natural History Occasional Paper No. 9, Edmonton, AB.
- Wallis, C. 1987. What is successful reclamation--the public's perception. Pages 107-110 in "Reclamation targets for the 1990s, proceedings of a symposium". Alberta Society of Professional Biologists/Canadian Society of Environmental Biologists, Edmonton.
- Achuff, P., J. Godfrey and C. Wallis. 1988. A systems planning natural history framework and evaluation system for Alberta Recreation and Parks. Prepared by Kanata Heritage Research and Interpretation, Calgary for Alberta Recreation and Parks, Edmonton.
- Sweetgrass Consultants Ltd. 1988. Environmentally significant areas of the Municipality of Crowsnest Pass. Prepared by Sweetgrass Consultants, Calgary, for Alberta, Forestry, Lands and Wildlife, Edmonton.
- Sweetgrass Consultants Ltd. 1989. Environmentally significant areas of the County of Paintearth. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- Godfrey, J. and C. Wallis. 1989. An evaluation of the Ministry of Recreation and Parks'

- conservation-outdoor recreation system and identification of candidate areas for the Mixed Grassland, Northern Fescue Grassland, Foothills Grassland, Central Parkland, Foothills Parkland, and Rocky Mountain Montane Biogeographical Zones. Prepared by Kanata Heritage Research and Interpretation, Calgary for Alberta Recreation and Parks, Edmonton.
- Cottonwood Consultants Ltd. 1990. Bow/Canmore Corridor environmental issues analysis. Alberta Tourism, Edmonton.
- Wallis, C. 1990. Reconnaissance survey of saline wetlands and springs in the grassland-parkland region of eastern Alberta. Prepared by Cottonwood Consultants, for World Wildlife Fund Canada, Toronto.
- Smith, W. and C. Wallis. 1991. An exploration of the alternatives to the Oldman Dam Project, southern Alberta. Prepared for Friends of the Oldman River, Calgary and Oldman Dam Environmental Assessment Review Panel, Vancouver.
- Wallis, C. 1992. Communications plan for Antelope Creek Ranch. Prepared by Cottonwood Consultants, Calgary, for Antelope Creek Habitat Development Area, Brooks.
- Sweetgrass Consultants Ltd. 1994. Preliminary inventory of Environmentally Significant Areas within the Foothills Model Forest. Prepared by Sweetgrass Consultants Ltd., Calgary, AB for Foothills Model Forest, Hinton, Alberta.
- Ecological Stratification Working Group. 1995. A national ecological framework for Canada. Agriculture and Agri-Food Canada, Research Branch, Centre for Land and Biological Resources Research and Environment Canada, State of the Environment Directorate, Ecozone Analysis Branch, Ottawa/Hull. (Cliff Wallis was a regional contributor)
- Cottonwood Consultants Ltd. 1995. Gwich'in Territorial Park, Biophysical Inventory. Prepared for Gwich'in Tribal Council, Inuvik.
- Avens Associates Ltd. 1996. Mount Pelly Territorial Park, Archeological Survey and Biophysical Inventory. Prepared for NWT Department of Economic Development and Tourism.
- Bradley, C. and C. Wallis. 1996. Prairie ecosystem management: an Alberta perspective. Prairie Conservation Forum, Occasional Paper 2, Lethbridge, Alberta.
- Sweetgrass Consultants Ltd. 1997. Environmentally Significant Areas of Alberta. Volumes 1, 2 and 3. Prepared by Sweetgrass Consultants Ltd., Calgary, AB for Resource Data Division, Alberta Environmental Protection, Edmonton, Alberta.
- Wallis, C. and C. Wershler. 1997. Waterton Lakes National Park, Ecological Land Classification (Wildlife Component) 1995-96. Prepared by Cottonwood Consultants Ltd. Calgary, Alberta for Canadian Heritage, Waterton Lakes National Park, Alberta.
- Cottonwood Consultants Ltd. 1999. American White Pelican, California Gull, Caspian Tern, Double-crested Cormorant, Great Blue Heron and Ring-billed Gull Colony Surveys -- Alberta 1998. Prepared for Ducks Unlimited Canada, Edmonton.
- Cottonwood Consultants Ltd. 2000. Vegetation Assessment for Reclamation Planning, Imperial Oil Site (Norman Wells). Prepared for Komex International, Calgary.
- Wallis, C. and C. Wershler. 2001. Natural History Inventory, 2000, Grizzly Ridge Wildland Provincial Park. Prepared for Alberta Environment, Valleyview.
- Alberta Sustainable Resource Development. 2002. Surveys of Plant Species Potentially at Risk, Foothills Fescue Grassland. Alberta Sustainable Resource Development, Fish and Wildlife Division, and Alberta Conservation Association, Wildlife Status Report, Edmonton, AB.
- Sweetgrass Consultants Ltd. 2006. Environmentally Significant Areas of City of Medicine Hat Properties. Prepared by Sweetgrass Consultants Ltd. for Police Point Nature Center/Grasslands Naturalists.
- Wershler, C. and C. Wallis. 2010. Innisfail Ecospace Inventory. Prepared for the Town of Innisfail by Sweetgrass Consultants Ltd., Calgary.
- Sweetgrass Consultants Ltd. 2017. Nose Hill Park Bird Monitoring, 2006 and 2015. Prepared by Sweetgrass Consultants Ltd., Calgary for City of Calgary Parks.
- Wallis, C. 2019. A Continental (Great Plains) Approach to Grassland Conservation. America's Grasslands Conference, August 2019, Bismarck, North Dakota, USA (in press).

CLIFF WALLIS

ACHIEVEMENTS, AWARDS

- Cliff Shaw Award, Saskatchewan Natural History Society, 1972
- Governor-General's Canada 125th Anniversary Medal, 1992
- Prairie Conservation Award, World Wildlife Fund, 1992
- Peggy Thompson Award, Alberta Society of Professional Biologists, 1993
- J.B. Harkin Medal, Canadian Parks and Wilderness Society, 1997
- Douglas H. Pimlott Award, Canadian Nature Federation (now Nature Canada), 2003
- "Ernie" Award, Alberta Wilderness Association, 2004

THIS DIPLOMA CERTIFICATE

IS TO CERTIFY THAT

Clifford A. Wallis

having complied with the requirements of the
Professional and Occupational Associations Registration Act of Alberta
on March 1, 1991
is admitted and registered as a member of the

ALBERTA SOCIETY OF PROFESSIONAL BIOLOGISTS

and is entitled to practice Professional Biology
within the province of Alberta using the title of

PROFESSIONAL BIOLOGIST

In witness whereof the seal has been hereto affixed
this 17 day of December 1991.



Clifford A. Wallis
President

Robert E. Shea
Registrar

