

Annotated Bibliography on Bird Watching and Related Topics

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Key words: birdwatchers, birders, wildlife viewing/watching, nature-based recreation/tourism, park/visitor management, outdoor recreation, bird conservation/preservation, naturalists, ecotourists, National/Provincial Parks, nature reserves/refuges.

1. Applegate, J.E., & Clark, K.E. (1987). Satisfaction levels of birdwatchers: An observation on the consumptive-nonconsumptive continuum. *Leisure Sciences*, *9*, 129-134.

Abstract: This study examines visitor satisfaction from consumptive levels of activity, such as hunting and fishing, to non-consumptive levels of birdwatching. Visitors to the Brigantine Unit of Forsythe National Wildlife Refuge, New Jersey, reported a high degree of satisfaction with their visit using a standard satisfaction scale which has been applied in previous studies with recreationists. Satisfaction levels reported by the visitors of this study were comparable with non-consumptive recreation activities, but were much higher than consumptive activities, such as hunting or fishing. Interestingly for birders, the level of satisfaction was related to the degree of skill in bird identification in that the more knowledgeable birders reported significantly lower levels of satisfaction than the novice bird watchers. The authors speculate that the low satisfaction levels of advanced birders may be due to a variety in goal identification, expectations, and preferences as compared to the less knowledgeable birders.

2. Barnes, S. (2003, Spring). In the Royal Society for the Protection of Birds (RSPB). A word from Simon Barnes. *Birds*, *19*, (5), 21.

Abstract: This one-page article discusses the issue of birder specialization versus simple bird watching and the pleasure derived from it. The author refers to this novice enthusiast as a 'bad birdwatcher' and suggests that the point of the activity and the passion for birds is lost in birders' obsession with expertise and with bird rarities. As opposed to seeking rare birds or making contribution to science, Simon Barnes promotes bird watching to the general public, rather than being constrained by expectations. In his words, "Birdwatching is not a specialized hobby, it is not necessarily an obsession. It is simply a way of living..." (p.21).

3. Blondel, J. (2004). *Birding in the sky: Only fun, a chance for ecodevelopment or both?* [Online]. Available: egis.cefe.cnrs-mop.fr/Tourism%20Frontpages/Blondel%20article.htm.

Abstract: Using the terms 'bird ecotourism' and 'green tourism' interchangeably, this 8-page article discusses the benefits and negative impacts of bird watching as ecotourism activity. The author examines these benefits and impacts in the context of promoting the natural resources, biodiversity, economy, and culture of tropical areas that are rich in wildlife resources, which are mainly the less developed countries. Bird watchers or birders are said to compose the largest group of the nature-based or wildlife viewing tourists in the world. Implications of such statement mean that this group may be dominant in ecotourism studies and typologies, particularly in tropical destinations which are rich in bird and wildlife species diversity, and are

struggling economically. The author offers several examples of successful integration of what he terms 'green tourism,' conservation and local development, which if properly managed offer valuable options for conservation of natural areas and cultural heritage.

4. Boyd, S.W., & Butler, R.W. (1996). Development of an Ecotourism Opportunity Spectrum (ECOS) for sites identified using GIS in Northern Ontario. Northern Ontario Development Agreement (NODA), NODA/NFP Technical Report TR-11.

Abstract: This report concisely discusses management frameworks and procedures that attempt to indicate acceptable limits of recreation and tourism use and the negative impacts resulting from such use. Among the discussed frameworks are: Recreation opportunity Spectrum (ROS), Tourism Opportunity Spectrum (TOS), Limits of Acceptable Change (LAC), Visitor Activities Management Planning (VAMP), and Visitor Impact Monitoring Process (VIMP). This report discusses the development of a new framework specifically designed for ecotourism opportunities, which incorporates ideas from ROS and TOS. This new framework, mainly the Ecotourism Opportunity Spectrum (ECOS), consists of eight components: 1) access, 2) other resource-related activities, 3) attractions offered, 4) existing infrastructures, 5) social interaction, 6) level of skill and knowledge, 7) acceptance of visitor impacts, and 8) acceptance for a management regime. In practical terms, first four factors of the ECOS framework have been applied to ecotourism areas in Northern Ontario, which have been previously identified by GIS.

5. Burger, J., & Gochfeld, M. (1998). Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. Environmental Conservation, 25 (1), 13-21.

Abstract: As natural areas are increasingly being exposed to people, in this case to bird watchers, it is important to consider the human-wildlife interactions in order to develop successful management tools for such areas and their human visitors. This study examines the foraging behaviour of five species (common gallinule, sora rail, glossy ibis, little blue heron, and Louisiana heron) of water birds at Loxahatchee National Wildlife Refuge, part of the Everglades, in Southern Florida, between the years of 1992 and 1994. To compare changes in their behaviour, the birds were observed before, during and after the departure of people. All species examined altered their foraging behaviour in the presence of people, such as changed their foraging time, rate, vigilance behaviour and movement (away from people). Both loudness and the number of people affected the birds' foraging behaviour. Authors suggest that attention should be devoted to limiting visitor access in order to provide undisturbed foraging regions of retreat for more timid species. Significant to management and trail design, it might be important to provide vegetation barriers near areas with high visitation rates to serve as these retreat regions.

6. Burger, J., Gochfeld, M., & Niles, L. (1995). Ecotourism and birds in coastal New Jersey: Contrasting responses of birds, tourists, and managers. Environmental Conservation, 22 (1), 56-65.

Abstract: Authors of this study examine ecotourism, and in particular bird watching, in the urban state of New Jersey. Despite many natural areas in the state, only few offer spectacular opportunities for ecotourism and thus are heavily visited for limited time periods. In the urban setting, visits to natural areas involve multiple uses by individuals and families. Ecotourists, and

birdwatchers in particular, are said to return to the same destinations. There are several avian categories used throughout the study: migrants, breeding birds, and solitary versus colonial species. Birder types include the solitary, small groups, and mass visits. Number of case studies from New Jersey is presented, highlighting interactions with nesting herons, least terns, and piping plovers. Negative impacts caused by ecotourists, mainly the birdwatchers, are compared to other types of human disturbance. The study illustrates a range of potential problems resulting from the human-bird interactions, and concludes that bird watchers and other ecotourists can impact birds at all times of the year—breeding, migration, and wintering. Both unsuccessful and successful examples of interaction and coexistence between people and birds are presented. The authors state that birders and birds can coexist harmoniously, but only when careful consideration is given to controlling the duration and closeness of the encounters, and at times even access during most vulnerable times of the year. The paper proposes that managers should be mindful of the various responses of birds to human intrusion, including response distance, flushing distance, approach distance, and tolerance distance. Understanding of these factors, careful planning and enforcement can create a situation where birds and birders can exist without undue disturbance to the birds.

7. Butler, J., & Fenton, G.D. (1987). Bird watchers of Point Pelee National Park, phase one: Bird watchers of Point Pelee National Park, Ontario: Their characteristics and activities, with special consideration to their social and resource impacts. *Alberta Naturalist*, 17 (3), 135-146.

Abstract: Point Pelee National Park, Ontario, is one of the most famous locations in the world for watching the spring passerine migration, drawing 80,000 gate visits of spring bird-watchers. Interviews with 2,000 bird-watchers document a range of birder differential use characteristics and impact parameters. Pelee birding is a highly intensified activity with birders spending an average of 9.8 hours each day, during an average visit of 4.6 days. This study found no significant relationship between high densities of park visitors and perceptions of crowding. Factors that contributed to perceptions of crowding included environmental disturbances by other birders and conflicts with other visitors: both birders and other user groups. Factors that contributed to visitor satisfaction included friendliness of other birders and related sharing of birding information and sightings. The bird-watchers were highly educated, with 59.7% of those interviewed holding the minimum of a bachelor's degree and 16.9% holding doctorate degrees.

8. Butler, J., & Fenton, G.D. (1988). Final Report: Bird watchers of Point Pelee National Park, phase one: Bird watchers of Point Pelee National Park, Ontario: Their characteristics and activities, with special consideration to their social and resource impacts. Wildland Recreation Program, Department of Forest Science, University of Alberta, Edmonton, Alberta.

Abstract: Point Pelee National Park, Ontario, is one of the most famous locations in the world for watching the spring passerine migration, drawing at the present time 80 000 gate visits of spring bird watchers to its unique and fragile resource base. In the spring of 1985, researchers examined the social and ecological factors associated with this recreation user group through the use of on-site personal interviews, participant observations, and trail measurements. This data, representing over 2000 bird watchers, documents a wide range of birder differential use characteristics and impact parameters. Pelee birding is a highly intensified activity with birders spending an average

of 9.8 hours each day, during an average visit of 4.6 days. This study found no significant relationship between high densities of park visitors and perceptions of crowding. Factors contributing to perceptions of crowding included environmental disturbances by other birders and conflicts with other visitors: both birders and other user groups. Factors which contributed to visitor satisfaction included friendliness of other birders and related sharing of birding information and sightings. Although bird watchers visiting Point Pelee are highly educated, with 59.7% of those interviewed holding the minimum of a bachelor's degree and 16.9% holding doctorate degrees, they also had a high negative impact on the ecological resources of the park resulting from off trail excursions in pursuit of birds. Forty-three percent of vegetation damage was a result of marginal trail viewing, 27% caused by exploratory impact, and 18% was caused by pursuit behaviour. Resulting unofficial paths accounted for 62% of total trail length in the study area. Potential management implications, as they relate to Point Pelee National Park, are presented and discussed.

9. Butler, J., & Hvenegaard, G.T. (N.d.). The economic values of bird watching associated with Point Pelee National Park, Canada and their contribution to adjacent communities. The Second Symposium on Social Science in Resource Management. University of Illinois, Urbana, Illinois.

Abstract: Recent increases in the popularity of bird watching across North America indicate significant economic contributions by bird watchers in a regional, national and international context. A University of Alberta research team interviewed 603 randomly selected bird watchers at Point Pelee National Park in order to collect data on bird watcher expenditures for travel and equipment, willingness to pay for their experience, and impressions of the park and community's effort to effectively host them. In nearby communities, 183 relevant businesses were interviewed to assemble information on bird-watcher induced revenues, marketing strategies, staffing implication, and changes in approaches intended specifically for the bird watcher user group. Pelee bird watchers are highly educated, they possess high levels of disposable income, and spend \$7.9 million annually. This figure could triple if quantity and quality of this type of tourism is improved.

10. Butler, J., Hvenegaard, G.T., & Krystofiak, D.K. (1994). Economic values of bird-watching at Point Pelee National Park, Canada. In Mohan Munasinghe, and Jeffrey McNeely. (Eds.). Protected area economics and policy: Linking conservation and sustainable development. Washington, D.C.: The World Bank.

Abstract: This paper reports on a 1987 study of 603 bird watchers at Point Pelee National Park in Ontario, Canada. The study found bird-watchers had very high education levels. Most of the respondents were international visitors to Canada. These tourists had an average of 15 years of bird watching experience, and spent 35.6 days per year on their sport. The average length of stay was 3.4 days. On average each person spent 9.8 hours a day birding. The bird-watching trips to this national park resulted in total trip expenditures of Can\$5,400,000, with Can\$3,200,000 spent locally. The survey found a substantial consumer surplus as well. The study found that most local businesses were underestimating the economic contribution made by this park-based tourism.

11. Butler, R.W., & Boyd, S.W. (Eds.). (2000). Tourism and National Parks: Issues and implications. New York: John Wiley & Sons.

Abstract: This book is a compilation of individual studies that are international in scope, covering national parks issues in UK, North America, Australia, New Zealand, and polar regions. Thematically organized, the authors examine historical context of tourism in national parks, settings for tourism, variety of issues and responses (i.e. sustainability, resource conflicts, impact and visitor management, partnerships, and international parks), and future context of the 21st century. In spite of the National Parks' role as tourist attractions and the foundation of important tourism industries, the relationship is not always positive and often there is an opposition from various public groups to the incorporation of tourism in National Parks. This volume explores the relationship between National Park systems and tourism in various contexts, beginning with the historical development of tourism in National Parks and arriving at their place in the tourism industry at present.

12. Canada Adventures Guide. (2004). New Brunswick bird watching adventure vacations. [Online]. Available: www.canada-adventures-guide.com/NewBrunswick/birdwatching.html

Abstract: This Canada Adventures Guide web page (and the web site in general) for New Brunswick is a good example of successful ecotourism marketing for various sectors of nature-based tourists, ranging from the consumptive to the non-consumptive enthusiasts. Various specialized options, such as fishing and hunting, outdoor adventures, wildlife viewing (nature/photo tours, whale watching, and bird watching), and winter adventures are offered province-wide. The web site also provides name links to local outfitters for details and information on rates. In particular, New Brunswick offers nature tours for specialized travellers, namely the bird watching adventure vacations for birders. This site promotes sea birds in particular and the province's outfitters who provide a full program of outdoor adventure, wildlife viewing, photography, art, culture, and eco-tours throughout the province.

13. Canadian Tourism Commission. (1995). Adventure travel in Canada: An overview of product, market and business potential. Ottawa, Ontario, Canada: Author.

Abstract: This study provides data from a national survey of adventure travel operations in Canada. It describes the current state of adventure travel in Canada. The primary target markets and the specifics of each market are described. Key factors and issues which affect the evolution of the adventure travel sector are presented. The principal competition is discussed. A performance evaluation is included. Trends, business practices and means of increasing efficiency, productivity and competitiveness are presented. The study uses low density outdoor recreation activities that are non-consumptive as the primary activity definition. The study concentrated on private sector tour operators. Park and site managers were not included. Outfitters, resorts and other firms that provided adventure services as a secondary activity were not included. It is not clear if non-profit operators were included. Of 669 tour operators contacted in 1993, 535 answered the survey. The survey found rapid, recent growth in the number of operators. All provinces have operators, with British Columbia being strongly represented. The operators were seasonal, with only 16% being in business year round. In 1993, the respondent operators accounted for 1.1 million traveller days of activity. The average tour length was 5.3 days. The mean price per day was CAN \$143.45. The sector generated 3,238 person-years of

direct employment. Within wildlife viewing, whale watching had more traveller days of activity than all other wildlife viewing activities combined. Within the land adventure category, trail riding had much more participation than did hiking, ice/rock climbing and bicycling. A total of 57% of travellers in this sector were Canadian.

14. Caudill, J., & Laughland, A. (1998, April). 1996 National and state economic impacts of wildlife watching. Based on the 1996 national survey of fishing, hunting and wildlife-associated recreation. Arlington, Virginia: US Fish & Wildlife Service, US Department of the Interior US Fish & Wildlife Service, Division of Economics.

Abstract: The 1996 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (FHWAR) is the most comprehensive survey of wildlife-based recreation in the United States, having had employed over 34,000 interviews with anglers, hunters and wildlife watchers. In 1996, more than 60 million people 16 years of age and older spent over \$29 billion on trips and equipment in the pursuit of observing, feeding, and photographing wildlife in the United States. Wildlife-watching expenditures substantially contributed to federal (\$3.8 billion) and state (\$1.04 billion) tax revenues, jobs (1,010,590), earnings (\$24.2 billion), and industry output (\$85.4 billion). This report addresses the national participation in wildlife watching, expenditures associated with this participation, estimates of the total economic activity generated by these expenditures, total employment and employment income associated with these expenditures, and estimates of associated state and federal tax revenue. Only primary participants were analysed in the survey, meaning that the principal motivation for the trip, activity or expenditure was wildlife related. However, both primary residential and non-residential participation was included in the survey.

15. Clark, W.R. (1987). Economics and marketing of "Canada's Capistrano" Diamond. A.W. & F. L. Fillion (Eds.). The Value of Birds. Cambridge, England: International Council for Bird Preservation.

Abstract: At Pembroke, Ontario, the annual flocking spectacle of swallows attracts 10,000 visitors each year. Benefit-cost analysis results (benefits exceed costs by nearly four to one) suggest that a sanctuary should be created to preserve this important ecological and tourism resource. Using the Travel Cost Method, the present net value of the site is estimated at \$520,000. Clark reviews the conservation campaign to protect the swallow roost.

16. Conner, N., & Christiansen, G. (1998). The contribution of Coolah Tops National Park to regional economic development. Hurstville, New South Wales, Australia: New South Wales National Parks and Wildlife Service.

Abstract: Coolah Tops National Park is located in the Coolah Shire in central west area of New South Wales State. This paper reports on a project to construct an input-output table for the Coolah Local Government Area to reveal the economic structure of the regional economy and to provide a basis for estimating flow-on effects from selected expenditures related to the National Park. It also included an analysis of the park service expenditure on the development and operation of the Park and the preparation of estimates of expenditures by visitors to the Park. The study found that the total economic impact of the ongoing operation of the national park add \$283,000 in gross output (gross regional business turnover) and \$150,000 to gross regional

product (GRP) including \$111,000 in household income paid to the equivalent of four people in the Coolah economy. The establishment of the park added up to \$1,799,000 in gross output, and \$630,000 to GRP which included \$501,000 in household incomes. The employment impacts of this expenditure equated to 17 local jobs for that period. Present visitation to the park is estimated to be about 4,000 per year, mostly of short duration and of people living within a three hour drive of the park. The estimated expenditure of these visitors contributes \$92,000 to gross output and \$52,000 to GRP, including household income of \$44,000 paid to the equivalent of three jobs in the local economy. The study concludes that the national park has potential to make an important contribution to the economic and social development of the region. The study states that the park acts "as a seedbed for local economic and social development."

17. Cooke, F. (2003). Ornithology and bird conservation in North America - a Canadian perspective. Bird Study, 50 (3), 211-222.

Abstract: The author of this study compares North American and European ornithology, partially by analyzing the topics of research in the last 50 years, and in doing so finds many differences between the two. In North America, the indigenous people played a major role in the transference of local knowledge, compared to the natural evolution of knowledge developed in Europe. The food value of game led to a tradition of conservation and wildlife management in North America, alongside an organized exploration of the avifauna by museum-based collectors as the origin of ornithology. With the introduction of the Migratory Birds Convention Act in 1917, North American ornithology is influenced by federal, state and provincial governments who have a statutory responsibility for the protection of wild birds. USA, Canada, and now Mexico are responsible for the administration of the Act, and as such many initiatives in bird conservation involve international co-operation for all bird species. Similar to the British Trust of Ornithology, many North American partnerships with government, professional and amateur ornithologists (e.g. Bird Studies Canada) have resulted in monitoring of bird populations. The author states that there is still scarcity of population studies and survey information in the mainstream ornithological journals in North America.

18. Daigle, J.J., Hrubec, D., & Ajzen, I. (2002). A comparative study of beliefs, attitudes, and values among hunters, wildlife viewers, and other outdoor recreationists. Human Dimensions of Wildlife, 7, 1-19.

Abstract: Authors of this article assessed perceived benefits of outdoor recreation activities using a mail survey. The theory of planned behaviour and the behaviour hierarchy provide a conceptual framework for the study of recreation and wildlife-related benefits. The study revealed that hunters, wildlife viewers and outdoor recreationists differ to a great extent in their beliefs about the outcomes of their behaviours and in their attitudes, subjective norms, and perceptions of behavioural control, as well as their wildlife-related values and values to life. Their preferred activities were perceived as producing more desirable outcomes, and were associated with more favourable attitudes, subjective norms, and perceptions of control. These activities also reflected broad value orientations to wildlife and to life. Findings of this study indicate that some activities lend themselves better to produce desired benefits for different types of people, and thus outdoor recreation participants should be served in different ways to optimize for their derived benefits. The authors suggest that additional work within this model should be approached to examine other outdoor activities, such as big game versus small game hunting, or

subgroups within a specific activity. This study compared hunters, wildlife viewers and outdoor recreationists on variety of outcomes; however, it did not investigate birdwatchers in particular.

19. Dearden, P., & Rollins, R. (Eds.). (1993). Parks and protected areas in Canada – Planning and management. Toronto, ON: Oxford University Press.

Abstract: This edited book contains 15 individually authored chapters addressing various issues related to the planning and management of Canadian parks and protected areas. These protected areas play a central role in achieving an ecological balance if not a sustainable development. The fifteen papers in this volume describe the establishment and management of protected areas in Canada, with a focus on the Canada's National Park system and other large natural parks. Two chapters address the Provincial Park system. Another chapter analyses parks legislation and practice at all levels of the government—national, provincial, regional, and municipal. Other topics covered in this volume include the history and functioning of the National Park system, aspects of conservation, visitors and resources management, nature interpretation, native interests, marine parks, regional considerations, and Canada's role in the international context. The authors comment that the challenge facing Canada lies in deciding how to protect the country's natural diversity before the opportunity vanishes forever, and what should be allowed to happen in National Parks and protected areas once they have been established.

20. DeRoy, T., & Jones, M. (1998). King of the jungle. International Wildlife, 28 (6), 52-58.

Abstract: This paper describes an encounter of a harpy eagle in the Amazon Jungle of south eastern Peru by a team of photographers to capture the first-ever images of one of the most powerful birds of prey in the world. The authors provide a description of the route to the birds' habitat and efforts by natives to organize an ecotourism project. These secretive birds are becoming scarcer as people encroach on their rainforest environment, in this case the nearby native village of Infierno (about 400 people) on the banks of the Tambopata River. The species is little known. They range from southern Mexico to northern Argentina. Harpies are rare and nearing towards being threatened. Several problems account for their rare status: being so large these birds make a satisfying quarry for hunters in search of bush meat, regarded as a symbol of power they are collected as part of shamanistic beliefs, and the birds' prey species are also sought by people. Problems of deforestation and shrinking of the birds' habitat, as well as the birds' very long chick-rearing period of 2 months incubation, further account for the low number of this species. A successful small-scale ecotourism venue set up in cooperation with the Infierno people is presented as an example of conservation of this bird species. A young graduate from Lima, Eduardo Nycander, shared his conservation dream with his business partner, Kurt Holle, by forming a small tour company named Rainforest Expeditions in 1992. Their policy involves attracting sufficient funding from ecotourism to support the preservation of threatened species, creating financial opportunities for the local people as opposed to relying on natural resources, and mustering funds to involve young Peruvian biology students in jungle research. Their policy involves strong participation by the local native people of Infierno, including contracts of profit sharing.

21. Deruiter, D.S., Donnelly, M.P. (2002). A qualitative approach to measuring determinants of wildlife value orientations. Human Dimensions of Wildlife, 7, 251-271.

Abstract: This qualitative study used an exploratory approach to understand the determinants of value orientations toward wildlife. In-depth interviews with 18 participants were used to explore these determinants of wildlife value orientations through four main dimensions: 1) socialization, 2) experience, 3) personal characteristics, and 4) place. Results of this study suggest that these 4 dimensions are appropriate in organizing the determinants of wildlife value orientations; however, the combination and importance of various dimensions fluctuate for different people. Fathers, as an example, were important and common influences, as was cohort and the place of upbringing, whether rural or urban, which played a key role in shaping the participants' wildlife value orientations. Direct experiences with wildlife were critical for some participants. For some participants, religiosity and gender had important influences on their wildlife values.

22. Diamond, A.W., & Fillion, F.L. (Eds.). (1987). The value of birds. Cambridge, England: ICBP Technical Publication No. 6.

Abstract: This technical publication on bird conservation is based on the proceedings of a symposium and workshop held at the XIX World Conference of the International Council for Bird Preservation on June 1986, at Queens University, Kingston, Ontario, Canada. The volume addresses the value of birds to human society, such as means of foreign exchange through wildlife tourism and bird watching, or as complex mechanisms of warning system for pollution and pesticide residue. The case studies in this volume provide current world-scale examples of the value of birds as socio-economic resources and bio-indicators. Other than the economic usefulness of wildlife, examples point to conservation based on ethical and ecological strength for all species and not ones selected to be of more worth for any particular reason, in other words value above price. The case studies in the first section of this volume examine birds as socio-economic resources, with international examples from Canada (including aboriginal Cree), West Germany, America, Australia, Jamaica, and Northern Kenya. Case studies in the second part address birds as bio-indicators of environmental conditions based on examples from the UK, Canada (prairies and Great Lakes), Sweden, and Wales.

23. Dickinson, R., & Edmondson, B. (1996). Golden wings. American Demographics, 18 (12), 47-49.

Abstract: Close to 25 million Americans travelled for the primary purpose of observing, feeding, or photographing wild birds, while 63% fed birds at home. Total expenses associated with non-consumptive wildlife recreation were estimated at \$18.1 billion in 1991. Since birders are an attractive group to marketers, some areas are making efforts to encourage birder visitations despite lack of data. Texas established a state task force on nature tourism in 1993 following the American Birding Association's listing the state as the country's premier bird watching destination. In the year 1991 bird watchers contributed \$155 million to Texas economy. Members of the American Birding Association are said to be the hard-core birdwatchers. Audubon and Times-Mirror Publications looked into launching a club for backyard birders who were potentially a huge market, only to discover that it is large but equally disorganized. About 45,000 people belong to birdwatching clubs, 1.9 million birders to conservation organizations active in preserving bird habitat, and 373,000 subscribe to bird-related publications. People who

travel to enjoy wildlife are younger than those who enjoy it from home, with 55% aged 25 to 44 in the year 1991. Feeding birds in backyards seems to be more prevalent than traveling to observe them, although these backyard feeders are a less committed crowd.

24. Eagles, P.F.J., & McCool, S.F. (2002). Tourism in National Parks and protected areas: Planning and management. New York, NY: CABI Publishing.

Abstract: This book is primarily concerned with management of visitors and tourism, where park management involves three interrelated aspects of natural and cultural resources, visitors and the tourism industry, and the administering organization. The authors state that the planning and management of park visitation and tourism receive little scholarly emphasis, which is addressed in this book. The main goal of this volume is to describe up-to-date tourism planning and management in national parks and protected areas, and secondly to provide guidelines for best practices in tourism operation. This book includes case studies and examples from around the world, including Argentina, Australia, Belize, Canada, Costa Rica, France, Ghana, Indonesia, New Zealand, Kenya, Mexico, Nepal, St. Lucia, South Africa, Tanzania, the U.S. and the U.K. These writings should assist in the dissemination of information about effective approaches that have been developed and are already in place.

25. Environment Canada. (2004). Putting an economic value on wetlands – Concepts, methods and considerations. [On-line]. Available: www.on.ec.gc.ca/wildlife/factsheets/fs_wetlands-e.html

Available: In considerations for determining value for wetland areas, a case study of Long Point was presented and economic valuation was examined in midst of current literature. A 1981 study of the large wetlands around Long Point, Lake Erie, Ontario used contingent valuation to measure the annual net recreation benefits derived by Canadians from these wetlands, or in other words what people are willing to pay above their current expenditures to receive the same benefits. The study found that recreational users spent \$215,906 in 1999 in total to receive benefits estimated to have contingent value of \$386,000 per year. For every dollar users spent, they received \$1.79 in benefits, a return of 179%. In this case, expenditures are not measures of economic value, but of the cost of attaining certain benefits. Among the benefits derived from the Long Point wetlands are: recreational use, wildlife production, nutrient retention, and groundwater recharge/discharge. Many values derived specifically from Great Lakes wetlands are further summarized in the “Wetlands and economics: An annotated review of the literature” (1988-1998). Most studies have focused on sites of high economic value and on specific wetland benefits being valued in the study and chosen methodology. Wetland valuation studies in Great Lakes basin are complex and varied.

26. Eubanks, T., Kerlinger, P., & Payne, R.H. (1993). High Island, Texas – A case study in avitourism. Birding, 25 (6), 415-420.

Abstract: Birding or avitourism is said to be among the most popular non-consumptive wildlife activities. One of the most renowned destinations for this segment of tourists in the U.S. is High Island, Texas, which provides a unique opportunity to quantify birding’s economic impact at a single location. The 633 respondents who filled out the questionnaire represented about 10% of the total number of visitors to Houston Audubon Society’s High Island Sanctuaries that season.

The average profile of this group was middle aged, highly educated, and financially successful male. Local residents composed 42.4% of High Island's visitors, whereas the remainder were non-residents from 35 states and 5 foreign countries. The local resident visitor spent on average \$46 per trip, while non-resident American travelers spent \$693, and foreign visitors contributed \$1,881. Total economic impact of birders traveling to and staying in the region exceeded \$2.5 million, of which \$2.4 million was contributed by non-resident avitourists and \$120,000 by local residents.

27. Eubanks, Jr., T.L., Stoll, J.R., Ditton, R.B. (2004). Understanding the diversity of eight birder sub-populations: Socio-demographic characteristics, motivations, expenditures and net benefits. Journal of Ecotourism, 3 (3), 151-172.

This article brings attention to the growing popularity of birdwatching in scope of the limited understanding portrayed by national studies. Instead, this study points to various sub-groups among birders, exploring within-group differences among eight geographically dispersed birder sub-populations in terms of their demographic characteristics, birding motivations and behaviour, expenditures and willingness to pay. The authors found significant group differences for most behavioural, motivational, and economic measures, and thus they recommend subpopulation studies of birders as opposed to the generalizations about the overall birder population.

28. Fennell, D.A. (1999). Ecotourism: An introduction. New York: Routledge.

Abstract: Using a wealth of international case studies and photographs, this book provides an accessible and comprehensive introduction to the key foundations, concepts and issues related to the field of ecotourism. Among the discussed issues are foundations of ecotourism, tourism and ecotourism policy, economics of ecotourism, marketing and management, social and ecological impacts of tourism, ecotourism and development, and the role of ethics in ecotourism. The author demonstrates that as an environmentally sounder type of alternative tourism, ecotourism has forced developers and decision-makers to re-evaluate the role that tourism plays within a destination. This role is examined from the perspective of the industry, local people, tourists, and other competing and complementary industries. Many typologies and conceptual frameworks are offered throughout this volume, and several references on ecotourist typologies and on other nature-based tourists are discussed. The author observes that studies involving ecotourists have been found to mirror related research on birdwatchers.

29. Fermata Inc. (2004). Sustainable tourism in natural areas market study. Montreal, Quebec: Commission for Environmental Cooperation. [On-line]. Available: www.fermatainc.com/sustainable_tourism/

Abstract: Primary research conducted between 1998 and 2000 in four regions of the U.S. asked respondents to categorize their interest in birding and other outdoor activities. For the purpose of these surveys, the researchers provided the following defined categories; 1) committed birder, 2) active birder, and 3) casual birder. Data were gathered in the following six surveys from respondents who categorized themselves in any one group: 1) travelers along the Great Texas Coastal Birding Trail, 2) 1998 Rio Grande Valley Birding Festival, 3) wildlife-associated recreation on the New Jersey Delaware Bayshore, 4) two California nature festivals: American

River Festival and 5) Kern Valley Festival, and 6) Platte River Nature Recreation Study. Fermata also identified other similar research and compared relevant dimensions discussed in other research. Findings from Fermata's surveys and HLA/ARA 1994 study (*Ecotourism—nature/adventure/culture: Alberta and British Columbia market demand assessment*) provide a snapshot of the typical ecotourists and their travel habits.

30. Foot, D.K. (1990). The age of outdoor recreation in Canada. Journal of Applied Recreation Research, 15 (3), 159-178.

Abstract: Due to population aging, past activity growth rates will likely fail to provide adequate indication of future activity patterns. This study examines Canadian population projections and U.S. National Recreation Surveys of 1965 and 1982 in order to further explore the potential impacts of aging population for the future of outdoor recreation in Canada. Results indicate that outdoor recreation growth is least likely to occur in winter activities and sports, and most likely to take place in natural environments and general recreation (i.e. bird watching and walking). Recreation managers and decision makers should consider reorientation away from facility-based recreation towards recreation based on natural environment. This study offers a methodology for incorporating important influence on population growth and aging on recreational activities. It further incorporates demographic factors and socio-economic influences as reflected in recreational activity participation rates. Results provide insights into the effects of changing demographics and socio-economic conditions on recreational activities.

31. Gartner, W.C., & Lime, D.W. (Eds.). (2000). Trends in outdoor recreation, leisure and tourism. New York: CABI Publishing.

Abstract: This book addresses trends in outdoor, nature-based recreation, leisure and tourism at present and in the future. It is written by authorities from North America, Europe, Africa and Australia. The many contributors of this volume analyze variety of current trends that shape how people travel and play, and offer interpretations of what these trends may mean for the future. In doing so, the authors address mega trends such as population growth and technological advances, and tourism and recreation trends such as tourist distribution, consumption centres, travel patterns, consolidation, energy, communications, public involvement, and fees for public land use. This volume compiles collection of studies addressing factors and forces shaping demand for and use of the natural resources (i.e. gender, demographics, social evolution, technology, and cultural dimensions), current supply and policy of existing natural resources for tourism and outdoor recreation, participation in tourism and outdoor recreation (i.e. through different activities and styles, and for various benefits), evaluation and attached value to the natural resources (i.e. methods of measurement and impacts), development and organization of resources for use on a global, regional and community scale, and management and operations targeting distribution, marketing, conflict, services, partnerships, best practices, professionals, and youth.

32. Gillespie, R. (1997). Economic value and regional economic impact: Minnamurra Rainforest Center, Budderoo National Park. Hurstville, New South Wales, Australia: New South Wales National Parks and Wildlife Service.

Abstract: Budderoo National Park is located in the Kiama Region south of Sydney in New South Wales. The park protects significant portions of rainforest, and the associated flora and fauna.

The National Park and Wildlife Service manages the park for conservation and for local economic development. The Minnamurra Rainforest Centre, located in the Park, provides high quality interpretation services to the park visitors. This report describes an economic impact assessment of the contribution of the Rainforest Centre to the regional economy of the Kiama Local Government Area. The travel cost method was used. Park visitation was 140,000 in 1995 and the average visit was less than one day. The study found that the consumers' surplus of recreation use of Minnamurra Rainforest Centre was \$28 to \$44 per person, or \$3,900,000 to \$6,200,000 per year. The present value of the recreation use benefits was in the order of \$56 M to \$89 million. Using input-output analysis, it was found that the visitors contributed an estimated \$2.2 M to \$4.2 M in output, plus \$2.2 to \$4.2 M in value added. The total employment impact ranged from 70 to 120 local jobs. This is an impressive study of the economic impact of ecotourism to one destination.

33. Glyptis, S. (1993). Leisure and the environment – Essays in honour of Professor J.A. Patmore. London, UK: Belhaven Press.

Abstract: This volume is a landmark inventory of the field of study addressing the links between leisure and the environment. The book traces major issues and themes of the subject matter both on the local and global scales, although mostly about Great Britain, and addresses the planning of leisure for human needs and environmental variations. Specific contents addressed in this volume include perception and social change, leisure planning, conservation and recreation management, economic change, special environments, and the global setting.

34. Hagner, C. (2004, February). Fewer Birders. Birder's World, 17.

Abstract: This article provides a brief summary on the report by the U.S. Fish and Wildlife Service entitled, "Birding in the United States: A Demographic and Economic Analysis." The article reports that according to this document, the number of bird watchers decreased between the year 1991 and 2001. In the year 1991, 51.3 million Americans observed birds in their backyards, in the year 1996, that number dropped to 42.2 million people, and further to 40.3 million in the year 2001. Despite this decrease, the economic influence of bird watchers is significant, being that of \$32 billion (in 2001) spent on optics, travel, and other associated expenses. This article is very brief and it does not discern between birding and bird watching, which is a very important distinction.

35. Hagner, C. (2004, February). Do not disturb. Birder's World, 22.

Abstract: This article illustrates the wide spectrum of bird watchers (not birders) and in particular problems associated with the lack of education and ethics in watching birds. The author of this article explains the damaging effects of chasing a nesting rare bird for the purpose of taking a good photograph. Issues being addressed include the lack of public policy or codes of ethics, citizen action pursuits, and absence of fines for harassment, all in the name of promoting the welfare of birds and their environment.

36. Hamel, M., & Duwors, E. (1999). The Importance of Nature to Canadians: A User's Guide to the Methodology of a 1996 Survey. Government publication.

Abstract: The survey on the importance of nature to Canadians in 1996 was conducted by

Statistics Canada between the months of February and June 1997 with the cooperation and support of Environment Canada and 14 other federal, provincial and territorial partners. This manual was produced to provide a details outline of the survey, its methodology, and the data set that is available for analysis.

37. Hammitt, W.E., & Cole, D.N. (1998). Wildland recreation – Ecology and management. (2nd Ed.). New York: John Wiley & Sons.

Abstract: This book serves as a guide to the management of ecological impacts of recreation activities on wilderness resources. The authors provide detailed coverage of wildland recreation management issues, including ecological impacts of recreation activities to resource components, spatial and temporal patterns of recreation impacts, trends in wildland recreation use, factors such as environmental durability and visitor use affecting impacts, strategies and concepts of resource and visitor management (i.e. limits of acceptable change), long-term monitoring of recreation impacts, site management and associated socio-economic factors, trends in meeting increased demand for outdoor recreation, alternative approaches to wildland recreation resource management, and international research in wildland management and ecotourism. This volume provides solutions to such important recreation resource problems as accommodating rapidly growing numbers of outdoor recreation participants without compromising the ecological integrity of the wilderness resources. Issues include coming to agreement on acceptable impacts to natural resources and expanding services with very little growth of the natural resource base or funding. The authors present an extensive literature review encompassing international examples on the subject of wildland recreation management issues.

38. Harshaw, H.W. (2000, November). The economic valuation of selected Canadian non-timber resources: An examination of valuation methods and a review of results. Doctoral Dissertation, Department of Forest Resources Management, University of British Columbia, British Columbia, Canada.

Abstract: The tradition for North American management of forested lands has been primarily concerned with harvesting timber values. A shift in forest management suggests a holistic paradigm which incorporates the value of non-timber forest amenities, among which are outdoor recreation, aesthetics, harvest of botanical forest products, maintenance of wildlife populations, sequestration of carbon, spiritual values, harvest of medicinal products, and maintenance of biodiversity. This doctoral dissertation addresses economic valuation of Canadian non-timber forest resources, and discusses relevant studies of non-timber resources in the U.S. Pacific Northwest as the region offers many similarities to British Columbia. Studies and reports are divided into wildlife, recreation, old growth/wilderness preservation, First Nation values, economic impact costs of non-timber value protection, and other (medicines, botanical, water, marshes, aesthetics, soil, and carbon sequestration). Non-timber resources are those goods, services and amenities obtained from forested areas that derive their worth independent of the economic value of timber in that same area. The valuation of non-timber values is difficult because the price assigned to a non-timber value may not reflect its economic value. However, the importance of including non-timber values in valuation considerations is a matter of equity. The satisfaction and utility that people derive from wildlife ought to be taken into account in economic trade-off analysis. The problem lies in balancing the costs and benefits of timber and non-timber values, especially since many non-timber values are not market-traded and unpriced.

39. Higham, J.E.S. (1998). Tourists and albatrosses: The dynamics of tourism at the Northern Royal Albatross Colony, Taiaroa Head, New Zealand. Tourism Management, 19 (6), 521-531.

Abstract: This article examines wildlife tourism (associated with ecotourism) in the context of New Zealand—a country where wildlife attractions have experienced rapid growth in demand since the mid 1980s. In specific, the case of the North Royal Albatross Colony, Taiaroa Head, is examined. Further, this article addresses the complexities of understanding the impacts of non-consumptive wildlife tourism, meaning tourist engagements with wildlife that takes place in the natural habitat without a deliberate disturbance or removal of that species. Secondary data sources are employed to test the application of Duffus & Dearden's conceptual framework to this bird colony, where all components are found to be upheld. The author concludes that site users, contact wildlife species, and the natural habitat of those species, all demonstrate various dimensions of change over time. In the absence of deliberate management intervention, wildlife tourism attractions evolve over time to the detriment of the visitor experience and the focal species. The impacts of tourism upon wildlife transcend tolerance, meaning that species may appear to be tolerant of tourists while significant impacts still occur. The application of the core components of Duffus & Dearden's conceptual framework suggests that wildlife impact research is not transferable, but site and species-specific. Research should further involve long-term monitoring of wildlife impacts and give consideration to the possible long-term biological consequences of tourist engagements with wildlife species.

40. Hornback, K.E., & Eagles, P.F.J. (1999). Guidelines for public use measurement and reporting at parks and protected areas. IUCN, Gland, Switzerland, & Cambridge, UK: Parks Canada, Cooperative Research Centre for Sustainable Tourism of Australia.

Abstract: This comprehensive manual is rich in applicable and hands-on knowledge on public use measurement and reporting specific to parks and protected areas. Its value extends to students, practitioners, professionals and scholars who are interested in practical issues and inefficiencies related to the subject matter. The guidelines are organized thematically, providing background to public use reporting, defining terms and concepts, and offering guidelines on program development from initial to advanced levels, various measurement options in statistics, different visitor studies, data collection and analysis, data processing computer programs, measurement of public use of marine protected areas, and the evolution of the best practice guidelines. Park visitors are important as they have political, economic, social, and ecological implications. Park planning and management is increasingly human-centered based on visitor use, thus all information generated by the visitors is valuable to governments, planning and management bodies, and local businesses, but also to surrounding communities and individual park managers. Good planning and management is dependent upon a good quality of information, especially in scope of increasing tourism demand in parks and protected areas.

41. Humberstone, B., Brown, H., Richards, K. (Eds.). (2003). Whose journeys? The outdoors and adventure as social and cultural phenomena – Critical explorations of relations between individuals, 'others' and the environment. UK: The Institute for Outdoor Learning.

Abstract: Published by the Institute for Outdoor Learning, the scope of this book is beyond education, including topics of nature, adventure and outdoor learning. Compiled from various

authors on the above subject matters, the studies offer a valuable contribution to the ever-changing debates taking place in outdoor studies. In particular, the discussions address adventure and the outdoors, and the relations between participants, others, the society as a whole and the natural environment. All studies are organized thematically targeting the issues of inclusion, philosophy, adventure and society, outdoor practitioners, research and outdoor experience, encountering nature, and contested adventures and identities. This collection of papers offers valuable insights in exploring the outdoors and adventure as important cultural and social phenomena.

42. Hvenegaard, G.T. (2002). Birder specialization differences in conservation involvement, demographics, and motivations. Human Dimensions of Wildlife, 7, 21-36.

Abstract: The author of this article reflects on birders as a significant component of wildlife-based recreationists and examines them as a heterogeneous group. This study offers a recreation specialization framework for birders in Doi Inthanon National Park, Thailand, and examines how conservation involvement, demographics, and motivations vary among specialized levels. Three specialization levels were developed based on questionnaire data from birders in this National Park: 1) novice, 2) advanced-active, and 3) advanced-experienced. The study found that specialization level was positively but weakly related to conservation involvement. Similar to most ecotourist profiles, age, income, and the percentage of males increased with specialization levels. Both advanced birder types were less interested in non-birding activities than novice birders.

43. Hvenegaard, G.T. (1996). Tourists, ecotourists, and birders at Doi Inthanon National Park, Thailand [Ph.D. Thesis]. Department of Geography: University of Victoria.

Abstract: The thesis studies the demand side of ecotourism. The thesis contains a thorough review of the demand side literature. A tourist typology of five groups was developed: birding ecotourists, general ecotourists, highlights general tourists, highlights travellers and trekkers. Recreational specialization among birders is discussed. The ecotourists studied were visitors to Doi Inthanon National Park in Thailand. Ecotourists were older and more educated than other tourist types. Ecotourists contributed more to the general conservation efforts than other tourist types; however, for foreigners, these contributions occurred primarily in their home countries, not in Thailand. Birders had much longer stays in the park (3.2 days) than either trekkers (1.0 days) or park visitors (1.1 days), and had correspondingly higher economic impact. The thesis provides significant detail on tourist types and birder specialization.

44. Hvenegaard, G.T., Butler, J.R., & Krystofiak, D.K. (1989). Economic Values of Bird Watching at Point Pelee National Park, Canada. Wildlife Society Bulletin, 17, 526-531.

Abstract: Point Pelee National Park, Ontario, Canada, being one of the most desirable locations in the world to observe the spring migration drew more than 57,000 gate visits by bird watchers in May of 1987. The purpose of this study was to determine the net economic value of bird-watching at Point Pelee National Park, Ontario, and to assess the local economic impact of birders on the Point Pelee local area. Authors interviewed 603 randomly selected birders to collect data on expenditures for travel and related equipment, and their willingness to pay for this experience. Pelee bird watchers were highly educated, with high incomes, and employed in

professional occupations. Total expenditures derived from bird watching amounted to \$3.8 million in May, 1987 or \$5.4 million for the entire year. The birders had a significant economic impact on the community, with local expenditures amounting to \$2.1 million in May, 1987 and estimated to be \$3.2 million for the entire year. Since the net worth of bird watching at Point Pelee includes more than monetary value (but reflects its true economic value), economic measures of satisfaction gained from this experience was estimated to represent \$6.3 million in net economic value.

45. Hvenegaard, G.T., & Dearden, P. (1996). Risks and benefits of ecotourism in northern Thailand. [On-line]. Available: <http://archive.idrc.ca/books/reports/1996/15-01e.html>

Abstract: The green-tailed sunbird is endemic to Doi Inthanon National Park in northern Thailand and a key tourist attraction for some visitors. Birders report spotting a total of 165 species in this area in only four days. In 1993, more than 900,000 people visited this National Park, which was triple the number of a decade earlier. Most tourists come to this area for multiple tourist attractions and not just birding, although a growing number of Thais have taken up birding. As birding is a popular form of ecotourism, it is promoted by the Thai officials as a tool for biodiversity conservation and rural development. One study conducted at Doi Inthanon suggests that ecotourists spent 33% more than other tourists, especially inside the park. More than 80% of surveyed tourists stated that they would be willing to contribute to conservation efforts at Doi Inthanon, although some had concerns about potential for corruption. The study confirms that ecotourism has the potential to cause harmful environmental impacts and negative social effects. Trekkers to this area felt that their contact with villagers had negative economic and social impacts. However, the article states that ecotourists have more beneficial environmental, social, and economic impacts on protected areas, such as National Parks, compared to the conventional tourists.

46. Kahn, P.H. Jr., & Kellert, S.R. (Eds.). (2002). Children and nature: Psychological, sociocultural, and evolutionary investigations. Cambridge, MA: MIT Press.

Abstract: The contributors of this volume incorporate research from cognitive science, developmental psychology, ecology, education, environmental studies, evolutionary psychology, political science, primatology, psychiatry, and social psychology. In the twelve individually authored chapters, contributors examine the evolutionary significance of nature during childhood; the formation of children's conceptions, values and sympathies toward the natural world; the effect of nature on children's physical and mental development; and the educational and political consequences of the weakened childhood experience of nature in modern society.

47. Kellert, S.R. (1997). Kinship to mastery – Biophilia in human evolution and development. Washington, DC: Island Press.

Abstract: This book consists of twelve chapters that examine many different expressions of biophilia. They describe the natural world as a source of material utilization and exploitation, physical beauty and appeal, empirical knowledge and understanding, communication and thought, exploration and discovery, bonding and companionship, mastery and control, moral and spiritual connection, and fear and repression. The author explores the physical, emotional, and intellectual benefits that people derive from these diverse expressions of the need to affiliate with

nature and life. He also examines how human personality and society depend on the effective realization of these affinities, and the consequent risks associated with the widespread biological depletion and environmental degradation of today. The author points to the different aspects of biophilia which are best viewed as products of bio-cultural evolution, meaning inborn tendencies shaped by the mediating influence of learning, culture, and experience. The wide-ranging expressions of biophilia are reflected in our perceptions, attitudes, and behaviour toward different species and landscapes. This book explores aspects of the variability and intricacy of the human response to natural diversity, where the diverse expressions of biophilia serve a multiplicity of human needs.

48. Kellert, S.R. (1996). The value of life – Biological diversity and human society. Washington, DC: Island Press.

Abstract: This book addresses the values of living diversity, their presumed importance to the realization of human functioning, and the threat posed by the current biodiversity crisis to our species' physical, emotional, and intellectual experience. Chapter 2 offers a detailed description of nine basic values of animals and nature, and connects these perceptions to human evolutionary development. Chapter 3 examines value differences in American society, specifically among different age, gender, education, occupation, urban/rural, and ethnic groups. Chapter 4 explores the influence of diverse animal-related experiences on perceptions of nature and wildlife including hunting, birding, zoos, television and film viewing, and abusing animals. Chapter 5 examines the effect of diverse species on the human psyche, illustrated by attitudes toward wolves, whales, and invertebrates. Chapter 6 assesses the role of culture, especially value differences among Eastern and Western societies, the world's great industrial super-powers, and views among developing non-Western nations, illustrated by Botswana. The complex problem of endangered species protection is discussed in Chapter 7. Chapter 8 explores the general challenge of conserving biological diversity, particularly human competition and exploitation of biological resources, and the need to develop more effective wildlife management institutions and structures. The final chapter focuses on the role of education and ethics, and returns to the initial consideration of how people depend on a vast complex of subtle relationships with nature and living diversity to achieve lives rich in meaning and value.

49. Kellert, S.R. (1985). Birdwatching in American society. Leisure Sciences, 7 (3), 343-360.

Abstract: This landmark study in the development of understanding of the nature-based group known as bird-watchers is based on the results of a national study of American attitudes, knowledge, and behaviours toward animals. The study describes the extent of participation in bird watching, the group's demographic characteristics, and their animal-related knowledge and attitudes. In considering the motivation for participating in bird watching, this study contrasts varying motives of casual versus committed birdwatchers. The author discusses the significance of bird watching for the emergence of non-game-related wildlife management programs in the U.S. Data used in this study were derived from personal interviews with 2455 randomly selected Americans in 48 nearby states and Alaska. Twenty five percent of the national sample indicated some degree of bird watching activity, while over 80% of this group were casual participants. Only 3% of the American public were identified as committed bird watchers who were likely to desire specific and specialized habitats, being both highly active and knowledgeable. Differences in the demographic, motivational, and attitudinal characteristics of casual versus committed bird

watchers suggest the desirability of varying management strategies for these bird watching groups. For instance, casual birders appear to be primarily interested in the aesthetic qualities of birds, whereas the committed birders state that their personal fascination with birdlife is the main reason for bird watching. Committed bird watchers had the highest knowledge of animals of any wildlife-related or demographic group in the entire study. These birders obtained especially high naturalistic and ecologicistic scores on the attitude scale. Results of this study suggest that active bird watching may promote an enhanced understanding, awareness, and concern for wildlife and the natural environment.

50. Kellert, S.R. (1979). Public attitudes toward critical wildlife and natural habitat issues. Phase I. US Fish and Wildlife Service funded study of American attitudes, knowledge and behaviours toward wildlife in natural habitats. Washington, DC: US Government Printing Office.

Abstract: This paper is the first of four reports on the results of a three-year study of American attitudes, knowledge and behaviours toward wildlife and natural habitats. It is directed at the first focus area (out of five), which is public attitudes toward critical wildlife and natural habitat issues. The report examines a number of critical issues including endangered species, animal damage control, habitat protection, consumptive use, wildlife management, and backcountry and parks use. According to this report, animal activity groups are classified into consumptive and non-consumptive and among the wildlife, domestic animals, and miscellaneous. Numerous stages were involved in constructing the national survey. The construction of a questionnaire consisted of literature review, consultation with state and federal wildlife management and private conservation organization, prioritizing of issues, five pre-tests, and finally questionnaire focus and significant considerations. The construction of the survey involved probability random sample of 3107 respondents, personal interviews, three call-backs, and a mail survey.

51. Kellert, S.R. (1980). Activities of the American public relating to animals. Phase II. US Fish and Wildlife Service funded study of American attitudes, knowledge and behaviours toward wildlife in natural habitats. Washington, DC: US Government Printing Office.

Abstract: This paper deals with various consumptive and non-consumptive uses of wildlife resources, including direct involvement activities such as hunting and bird watching, but also indirect uses such as wildlife television viewing and reading, or membership in conservation-related organizations. Furthermore, because experiences with domestic animals can influence wildlife attitudes and perceptions, such activities as pet ownership and livestock raising are also considered. The primary emphasis of this paper is on the size, social characteristics, geographic distribution, and wildlife attitudes and knowledge of various animal activity groups. It focuses on the activities of the American public relating to animals in terms of their frequency of occurrence, and the respective social characteristics and animal-related knowledge and attitudes of those who participate in these activities. Activities covered in this report are divided into three types: direct uses, indirect uses, and domestic animal-related activities. Furthermore, the direct wildlife-related activities were subdivided into consumptive and non-consumptive, and the indirect wildlife-related activities into non-wildlife direct and vicarious.

52. Kellert, S.R. (1980). Knowledge, affection and basic attitudes toward animals in American society. Phase III. US Fish and Wildlife Service funded study of American attitudes, knowledge and behaviours toward wildlife in natural habitats. Washington, DC: US Government Printing Office.

Abstract: This paper focuses on the general public and on major demographic groups in America according to age, gender, race, urban/rural residence, region, education, occupation, income, ethnicity, religiosity, political behaviour, marital status and property ownership. The public is examined in terms of basic attitudes toward wildlife, knowledge of animals, awareness of wildlife issues, species preferences and broad symbolic perceptions of animals. The subject of this report is the American public's fundamental attitudes, perceptions and understandings of animals. This presentation builds largely around three topics. The first considers factual knowledge of animals, in addition to relative awareness of selected wildlife management issues. In this regard, it also examines the views of the American public as a whole, as well as those of diverse demographic and animal-related activity groups. The second topic covers preference for and perceptions of various animal species. Finally, the remainder of this report considers basic attitudes toward animals in contemporary American society.

53. Kellert, S.R. (1981). Trends in animal use and perception in 20th century America. Phase IV. US Fish and Wildlife Service funded study of American attitudes, knowledge and behaviours toward wildlife in natural habitats. Washington, DC: US Government Printing Office.

Abstract: This final report covers two focus areas: historical trends in perceptions and uses of wildlife during the 20th century; and children's attitudes, knowledge and behaviours toward animals. Unlike the other three papers, the results in this report are not derived from a national survey, but rather the historical data are based on a content analysis of four regional newspapers that represent both urban and rural regions. Findings addressing children's attitudes stem from focused interviews with 250 children representing four age groups between 6 and 16 years of age. This research explores critical factors in the development of children's attitudes and knowledge of animals according to the chronological stages in this development.

54. Kellert, S.R., & Wilson, E.O. (Eds.). (1993). The biophilia hypothesis. Washington, D.C.: Island Press.

Abstract: This edited volume of individually authored essays on the topic of biophilia—otherwise the appreciation of life and the living world—represents an exploration of associated topics and issues. The various contributors have sought to examine elements of the question how nature, and its living biota in specific, has provided humans with an evolutionary basis for our species' physical, emotional, cognitive, and spiritual development. This book aims at understanding the complicated question of how human affect, intellect, language, culture, technology, and ethics are moulded by a basic human affinity for life and its processes. The notion of biophilia suggests that the possibility for fulfillment and self-realization may be found in our relationship with the diversity of surrounding life. The idea of biophilia asserts that the achievement of our fullest potential will depend on a matrix of complex and subtle emotional, intellectual, and physical interactions with the rich and diverse biota. The essays in this book attempt to explore a more complex theory of evolution than one based merely on the assertion of the physical struggle to survive. First part of this volume clarifies the concept of biophilia and

conservation ethic, as well as the biological basis for human values of nature. The second part examines the influence of aesthetics on humans (from biophilia to biophobia) in the context of natural landscapes, habitats, culture, hunting, and extinction. Part four discusses the topic of animal symbolism as cognitive biophilia. The following section discusses evolution through various understandings and philosophies, such as God, Gaia and biophilia, or artefacts. Finally, part six discusses ethics and political action associated with biophilia, selfish genes and shared values, and addresses some unanswered questions.

55. Knight, R.L., & Gutzwiller, K.J. (1995). Wildlife and recreationists: Coexistence through management and research. (First Ed.). Washington, D.C.: Island Press.

Abstract: This book is composed of 21 chapters of individually authored papers. Each paper discusses some aspect of the impacts and management of the wildlife-recreation interface. The chapters are organized in four parts. First part examines general issues, such as the historical and future trends in outdoor recreation, human dimensions of wildlife management, and wildlife responses to recreationists. Second part addresses specific issues, such as the physiological responses of wildlife to disturbance, indirect effect of recreationists on wildlife, and management of nature tourism. The following section, part three, includes case studies that examine matters of recreation and bald eagles, hunting waterfowl, wildlife viewing impacts, birder visitations, beach recreation in nesting bird habitats, water-based recreation in Florida Manatee habitat, and rattlesnake round-up practices. The last section, part four, provides a closing discussion on the management of wildlife recreation and the implications of land ethic for recreation. The book focuses on the direct effects of recreationists and their activities on wildlife. The papers are prepared by authors with recognized experience and research in the field. There is a strong emphasis on management of the wildlife-human interaction. Both consumptive and non-consumptive wildlife recreational activities are discussed. The vast majority of the authors and the case studies are from the USA but there is some reference to Canada, the UK and England.

56. Kopas, P.S. (2000). Taking the air: Canadian National Parks policy and contextualizing ideas. Ph.D. Dissertation. Department of Political Science, University of Toronto, Toronto, Ontario, Canada.

Abstract: This PhD. Dissertation offers an extensive and detailed analysis of Canadian National Parks policy with historical overview of the parks' development to the present repossession by the state and reinvention of government. The author argues that National Parks have various policy meanings, not just environmental protection. They are political symbols of reflection on national greatness, they are tools of economic development, they are about environmental policy, and about human landscapes rooted in Aboriginal and Euro-Canadian meanings of the land. Policy meanings have been fluid, changing according to the interaction of driving ideas, institutions, and interest groups. This Dissertation explores various meanings of National Parks, definition of Parks policy, challenges and solutions, public policy theory, contextualizing ideas and theory of policy of change, background to the post-war era and the beginnings of Canada's National Parks, the era of state initiative, the era of public participation, the initiative of organized interest groups, the repossession by the state, and the giving of meaning. In particular, the author investigates the reinvented government in the context of the Banff Bow Valley study, the World Wildlife Fund and the Group of Eight, market orientation, and harmonization of environmental policy between the federal and provincial governments.

57. MacIntosh, L. (Ed.). (1991). New Brunswick outdoor adventure guide. Fredericton, New Brunswick: Department of Tourism, Recreation and Heritage.

Abstract: New Brunswick has long been recognized as the province that tourists go through, on the way to Nova Scotia and P.E.I. This booklet is a market tool to emphasize the nature tourism features of the province. Articles are included on beachcombing, whale-watching, sailing, canoeing and kayaking, scuba diving, hiking, bird-watching, cycling, wild flowers, workshops, rock hounding, and parks. Each article outlines the features to be found in the province and the best way to utilize each feature. This well designed brochure is one of the first ecotourism marketing efforts by a provincial tourism agency in Canada.

58. Manfredi, M.J., Teel, T.L., & Bright, A.D. (2003). Why are public values towards wildlife changing? Human Dimensions of Wildlife, 8, 287-306.

Abstract: This study explores the association between societal factors theorized to affect value shift and wildlife value orientations across six western states. Theory and empirical research suggest that increasing affluence and education, and declining residential stability drive value shift. As such conditions arise there is a shift away from the traditional materialist values (i.e. physical security and economic well-being) toward post-materialist values (i.e. quality of life, self-expression, and self-esteem). This study examined factors that explain interstate variability in the proportion of individuals with materialist values and utilitarian orientation toward wildlife. Researchers found that a proportion of these individuals within a state are strongly and inversely related to income, urbanization, and education, and positively related to residential stability. These findings infer support for the theories above. Factors affecting the trend of affluence, education, mobility, and urbanization will affect future shifts in wildlife value orientations. Growing number of researchers suggest that the future of values toward natural environment will be closely tied to the relationship between economic growth and the expanding degradation of the environment. If current economic and social trends continue, a sustained erosion of traditional materialist orientations toward wildlife is likely.

59. Mangun, J.C., & Mangun, W.R. (2002). Wildlife watchers in the Western United States: A structural approach for understanding policy change. Human Dimensions of Wildlife, 7, 123-137.

Abstract: The present study monitors change in various social diversity indices for western states populations of non-consumptive wildlife recreationists using three survey data sets: 1985, 1991, and 1996 National Surveys of Fishing, Hunting and Wildlife-Associated Recreation. Longitudinal analysis of these three indices of social diversity provides means for assessing the structural stability of a policy target population. Public policy decision making can be affected by changes in governing partnerships, resource distributions, social structure, and other external factors. Changes in factors such as cultural values and social structure normally require several decades; however, systemic socioeconomic conditions external to policy subsystems in the west are changing in especially rapid fashion. Wildlife watchers comprise a well-defined target population within the western wildlife policy subsystem. This study applies aspects of Blau's quantitative model of social structure to obtain measures of group membership, status position, and overlapping social affiliations of wildlife watchers. As the American west continues to experience a dramatic transition from resource extraction to recreation, tourism, species

protection, and preservation, outdated policies will need to be revised to reflect the new realities of urbanization and environmentalism.

60. Manning, R.E. (1999). Studies in outdoor recreation – Search and research for satisfaction. (2nd Ed.). Corvallis: Oregon State University Press.

Abstract: This book integrates social science research through the examination of theoretical and methodological issues in the area of outdoor recreation, with practical implications of this research for scholars and professionals. The author examines a multitude of theoretical and empirical studies, reflecting on current research findings and concerns, such as benefits-based management, theory and methods of specialization, or the implications of race and gender in outdoor recreation participation. The book covers chapters on satisfaction, social aspects, attitudes, preferences, and perceptions, carrying capacity, crowding, indicators and standards of quality, motivations and benefits, management frameworks, recreation conflict, substitutability, specialization, alternative management practices, and principles. Thoughtfully coordinated, the book also includes a guide to the social science literature in outdoor recreation, including journals, proceedings, government documents, books, and bibliographic services.

61. McFarlane, B.L. (1994). Specialization and motivations of birdwatchers. Wildlife Society Bulletin, 22, 361-370.

Abstract: Motivations for participating in an activity are important for program and product development. Based on survey responses of 787 bird watchers in Alberta, this study identifies 4 salient motivations for the birding experience: 1) appreciative, 2) conservation, 3) achievement, and 4) affiliative. Furthermore, primary motivations differed across levels of birding specialization, suggesting it may be operating at a level of goal-orientation shifts similar to hunting involvement. The author suggests that Decker et al. (1987) model of involvement in wildlife recreation can be extended to include non-consumptive users. The study demonstrated that specialization can be a useful means of classifying birders and differentiating motivations, where the experience in an activity can affect the desired products. Managers should therefore provide a variety of opportunities within an activity to maximize satisfaction for participants.

62. Mieczkowski, Z. (1995). Environmental issues of tourism and recreation. New York: University Press of America.

Abstract: This book is a holistic and comprehensive collection of research devoted to environmental issues of tourism and recreation. Very detailed, critical, and logically organized, this volume draws on sources from both “hard” science (i.e. books and refereed journals) and “grey” literature (i.e. reports, periodicals and newspapers). The author examines both the environmental impacts on tourism and tourists, and the external human impacts on the natural environment as part of the tourism product, the positive and negative impacts of tourism and recreation on the natural environment with emphasis on the elements of environmental system as well as on various ecosystems, the issue of carrying capacity and environmentally sustainable tourism, environmental planning and management of tourism and recreation, and ecotourism as a form of alternative tourism. Drawing on international literature from English, French, German, Russian, Polish, and Spanish sources, this interdisciplinary book addresses various environmental aspects of tourism and recreation in a holistic context of relationships and

interactions with external non-tourist human factors.

63. Miller, K.K., McGee, T.K. (2001). Toward incorporating human dimensions information into wildlife management decision-making. Human Dimensions of Wildlife, 6, 205-221.

Abstract: This article compares values of wildlife held by stakeholder groups and public samples in Victoria, Australia, with a sample of wildlife managers' beliefs about these groups. The article also investigates the managers' views of the importance of incorporating human dimensions information in their decision-making. The authors conducted in-depth interviews among a sample of wildlife and environmental managers in state and local government agencies and members of wildlife management stakeholder group members and the public in Victoria. Research findings suggest that there can be considerable discrepancies between wildlife managers' beliefs and the values of wildlife held by stakeholder groups and publics that they serve. For example, beliefs that stakeholder groups such as the Australian Conservation Foundation and Bird Observers Club of Australia have an emotional rather than scientific perspective, or that people living in rural areas value wildlife primarily for utilitarian reasons. These misrepresentations could impact negatively on communication between wildlife managers and those groups, and the involvement of such groups and communities in the design and implementation of wildlife management programs. Researchers suggest that such discrepancies can be minimized by incorporating systematically obtained human dimensions information into management decision-making. Wildlife managers seem to appreciate the importance of human dimensions information, although they seem unsure about how to apply it.

64. Miller, M.L., Gale, R.P., & Brown, P.J. (Eds.). (1987). Social science in natural resource management systems. London, UK: Westview Press.

Abstract: This volume is one of the Social Behaviour and Natural Resources Series. Each of the three editors is associated with a different natural resource management system—the management of marine fisheries, forest policy, and parks and recreation—thus offering a holistic perspective on resource management. Marc L. Miller is associate professor of marine studies and adjunct associate professor of anthropology, Richard P. Gale is professor of sociology, and Perry J. Brown is professor of recreation behaviour and department head in resource recreation management. This collection of edited studies examines the roles of science in resource management, the applications of social science, and the analyses of institutions. Among the majority of US related references, there are several studies addressing National Parks planning and management in Canada, and some addressing issues in the Pacific Northwest, and New Zealand. This book provides a rationale for social science in policy, demonstrates its role in resource decisions, and explores the working relationship between social scientists and resource managers. The volume offers a social science perspective on natural resource management and an interdisciplinary approach to research.

65. Mitchell, J. (2000). Panama's radar for nature. Americas, 52 (5), 6-15.

Abstract: This article describes the transformation of abandoned military facilities—specifically a radar tower located amidst the Panama jungle—into a unique rain forest canopy observation post and eco lodge. The new eco lodge is contained within Soberania National Park, where biodiversity rivals other protected areas of the region. The military facility was originally built in

1960s to help defend the Panama Canal. The transformed Canopy Tower rises 900 feet above the National Park of 55,000 acre nature reserve bordering the canal. Once controlled by the U.S. and connected by a paved road, the park is the most accessible wilderness reserve in Panama. The eco lodge development is operated in the form of a concession agreement between the National Park agency and a private tourism operator. A concession in 1997 allowed the operator to develop the tower and surrounding 35 acres of rain forest for ecotourism and canopy research. The station was renovated to incorporate hotel rooms, display rooms, dining facilities and high level viewing platform, all of which was completed without cutting a single tree or using a bulldozer. The platform allows for the observation of birds in the forest canopy especially for those species that reside in the canopy uppermost levels. The facility also supports scientific research and conservation programs. The national park has excellent biodiversity that is attractive to ecotourists, and especially to bird watchers. Over 250 species of birds have been spotted at the tower so far.

66. Munasinghe, M., & McNeely, J. (Eds.). (1994). Protected area economics and policy – Linking conservation and sustainable development. Washington, D.C.: The International Bank for Reconstruction and Development, The World Bank.

Abstract: The papers in this volume originated from the Workshop on the Economics of Protected Areas at the IUCN-World Conservation Union Fourth World Congress on National Parks and Protected Areas, held in Caracas, Venezuela, during February, 1992. The writings seek to bring the techniques of environmental economics to bear on the vital task of improving the design and management of protected areas. The volume is organized into three main sections of individually authored studies addressing economic policy and incentives, economic valuation of protected areas, and funding mechanisms for ecotourism. Within the last section on ecotourism, Butler, Hvenegaard and Krystofiak examine the economic values of bird-watching at Point Pelee National Park, Canada.

67. NPWS National Parks and Wildlife Service. (1998, May). The contribution of Montague Island Nature Reserve to regional economic development. NPWS Environmental Economics Series. Economics and Regulatory Reform Unit, National Parks and Wildlife Service.

Abstract: Montague Island located south of Sydney, Australia, supports about 10,000 nesting pairs of little penguins, and provides breeding habitats for crested terns, silver gulls, shearwaters, and Australian fur seals. Besides the natural significance the island has a collection of historic buildings and contains significance for indigenous cultural heritage. The National Parks and Wildlife Service (NPWS) restricts access to the Island to protect these habitats from disturbance and damage, although the Service offers guided tours that cater for about 4,300 visitors each year. This report describes results of an economic impact assessment using input-output analysis carried out by the NPWS to identify the contribution of the Montague Island Nature Reserve (MINR) to the regional economy. This technique is used to illustrate the financial linkages which connects industries in a regional economy, and enables prediction of changes in gross regional output. The study found that the direct impact of \$121,000 per year spent by the NPWS in managing the MINR generated an estimated \$112,000 in flows to other sectors. The total impact of the Service's management expenditures was estimated at \$233,000 in gross regional output, including estimated total of \$162,000 in gross regional product. Expenditures by visitors to the Island were estimated at \$1.4 million in gross regional output per year to the regional economy,

linked to \$695,000 in gross regional product. Local public and private organizations in attractive natural areas will need to provide principal goods and services for visitors, including accommodation and supporting attractions, if they are to take advantage of visitors.

68. Parks Canada. (1995, December). Point Pelee National Park management plan. Ontario: Canadian Heritage, Parks Canada.

Abstract: Originally set aside as a National Park in 1918, Point Pelee was intended primarily to protect migratory birds. Although the birds remain a key element of attraction to the park, the appreciation of it has grown to include a full spectrum of this area: the water, plants and animals, and the wholeness of the preserved Carolinian ecosystem. This Management Plan provides direction for the activities of Parks Canada and partners in preservation for the next ten to fifteen years. The Plan consists of the Park's purpose in the National Park system, and of several objectives including protection and management of heritage resources; appreciation, understanding and enjoyment; and regional integration. Following section examines planning assumptions, and in particular important factors that influence Point Pelee National Park. Park concept, future vision and zoning are discussed in section four. Section five addresses the protection and management of park heritage resources, and part six examines the management of public opportunities. The remainder four sections examine support facilities, regional integration, environmental impact analysis summary, and public consultation.

69. Payne, R.J., & Graham, R. (1993). Visitor planning and management in parks and protected areas. In P. Dearden, & R. Rollins, (Eds.). Toronto, ON: Oxford University Press.

Abstract: This article addresses management of visitors to parks and protected areas by addressing various new management problems and examining visitor planning and management frameworks (i.e. Recreation Opportunity Spectrum, Limits of Acceptable Change, Visitor Impact Management, and Visitor Activity Management Process). The chapter lists three new management problems: 1) increasing numbers of visitors responsible for problems produced by the popularity of some parks and protected areas, 2) chance encounters between animals and people unfamiliar with nature can produce unpleasant experience, and 3) conflicts among visitors or between different groups. The authors compare and assess these frameworks on the basis of three issues: theory, process, and how well the framework relates to society. Results indicate that all four frameworks to varying degrees demand social science information and public involvement, except the LAC framework which includes informal information. In relation to planning theory, ROS is most closely associated with rational, holistic planning, whereas VAMP and VIM are rational planning frameworks constrained somewhat by policies and procedures, and LAC has a transactive approach. ROS and VAMP offer most contribution to visitor planning and management, in spite of the lack of an ecological planning structure to support ROS, and the inability of VAMP to affect park zoning decisions.

70. Pigram, J.J., & Jenkins, J.M. (1999). Outdoor recreation management. New York: Routledge.

Abstract: This book provides an analysis of leisure and outdoor recreation in the scope of their importance to society and their management, especially in natural settings. Outdoor recreation management being the focus of this volume is examined through content-specific topics with integrated international literature on the subject matter, rather than individual research studies. In

particular, the authors clarify the links between leisure, recreation, tourism and resource management, they examine current theories and concepts of outdoor recreation management, as well as approaches to planning and management in diverse recreation settings, and consider the interaction of outdoor recreation with potential forces from various social, economic, political and technological advances.

71. Tourism Queensland Research Department. (2004). Bird watching tourism. [On-line]. Available: http://www.qttc.com.au/research/pdf/special_interest/tq_birdwatching.pdf

Abstract: In 2002, Tourism Queensland conducted a review of current research to gain a better understanding of the bird watching tourism market. The study aimed to develop a market profile on the bird watching sector in Queensland, to provide information on birdwatcher needs, and to identify any product gaps and core issues that confront the operation and development of bird watching tourism businesses. The study comments on market insight, types of experiences sought, locations, categories of bird watchers, their activities, accommodation preferences, travel party, transport, information sources used, their demographic profile, and barriers to and opportunities of development of bird watching in Australia. There is no information on the identity of the author and the methodologies used are poorly described. The report has no reference list, suggesting that literature was not utilized. Current bird-watching studies and reports include: 1) Birdwatching Tourism in Australia, CRC Tourism Research Report, 2001; 2) Birdwatching Tourism, South Australian Tourism Commission, April, 2001; 3) Tropical North Queensland Birdwatching Report, QTTC, May 1998; 4) QTTC Birding-Aus Internet Survey, 1998; and 5) National Visitors Survey, Bureau of Tourism Research, 2000.

72. Riley, S.J., Siemen, W.F., Decker, D.J., Carpenter, L.H., Organ, J.F., & Berchielli, L.T. Adaptive impact management: An integrative approach to wildlife management. Human Dimensions of Wildlife, 8, 81-95.

Abstract: This article suggests that wildlife professionals need better ways to integrate ecological and human dimensions of wildlife management, and further that a focus on impacts will orient wildlife managers toward integrative decision-making. To manage impacts, the authors propose Adaptive Impact Management (AIM) with its seven primary components. The AIM builds upon strengths of systems thinking and conventional adaptive management, but differs in its objectives which include impacts on society rather than conditions of a wildlife population or habitat. Stakeholder involvement in management and shared learning among scientists, managers, and stakeholders are the main emphasis. The wildlife profession must develop management program acceptable to a large and growing array of stakeholders with diverse and often competing stakes in wildlife management. Focusing on impacts, AIM is expected to have several advantages over current adaptive management approaches: 1) increased relevance of wildlife management to society, 2) greater stakeholder satisfaction, 3) managers being more apt to and capable of embracing change and uncertainty, and 4) learning being a motivator as well as product throughout the management system. Authors suggest that this approach will help managers stay agile in an ever-changing management environment as opposed to a static, one-model-fits-all approach.

73. Robertson, R.A., & Butler, M.J. (2001). Teaching human dimensions of fish and wildlife management in U.S. Universities. Human Dimensions of Wildlife, 6, 67-76.

Abstract: Authors of this article comment on the importance of the application of human dimensions, or in other words the social sciences, to natural resource-related problems and issues. Being one of the newest areas of emphasis in wildlife management circles, this study offers an inventory of university courses in human dimensions of fish and wildlife management in the U.S. The variety of disciplines involved in teaching human dimensions courses ranges from those in biological and natural resource colleges, to the curricula for sociology, recreation management, and law enforcement officials. Important topics for inclusion in human dimensions of wildlife courses include: management issues (58%), identification of stakeholders (50%), human attitudes and behaviours (47%), and the application of human dimensions information to management decisions (42%). The inventory identified about 25 natural resource-related programs in U.S. universities which offer courses focused on human dimensions, majority of which have been instated within the last 15 years. The study points to the fact that such changes to programs are increasing at universities throughout the U.S., suggesting attention and emphasis in this area.

74. RSPB The Royal Society for the Protection of Birds. (2003, Spring). Landmark sentence for egg thief. Disturbing diaries of egg collector. Sparrowhawk caught in Larsen trap. Birds, 19, (5), 64.

Abstract: These three short articles follow a common theme of offences related to bird harassment, egg collection, and trapping of rare birds for sale. Although bird watching is not regulated by any legal means per se, these articles clearly demonstrate legal measures in place to deal with more serious offences. In the first article Carlton D'Cruze received a 6-month custodial sentence for 10 offences of taking eggs from various birds, and unlawful possession of 453 eggs, 29 dead birds, and egg collection equipment. Having collected some of the UK's rarest birds for over 20 years, this was the first time for a collector with no previous convictions to be given a custodial sentence. In the second article, Michael Terrence Davidson was convicted of selling 155 eggs from birds of prey, opposing the Control of Trade in Endangered Species Regulations 1997. He was imprisoned for 41 days for non-payment of £1,100 costs. Upon further allegations related to illegally disturbing rare breeding birds the court imposed a 2-year conditional discharge, £500 costs, and disposal of all bird collecting equipment. In the third article, Thomas Livock was fined £500 for illegally using a Larsen trap to catch birds of prey, whereas the traps are designed to legally catch five species of crows.

75. RSPB The Royal Society for the Protection of Birds. (2003, Spring). Cliffe hanger. Birds, 19, (5), 75-78.

Abstract: This 4-page article demonstrates the power of birders and bird enthusiasts, associated community groups, volunteers, and RSPB wardens as the guardians of safe natural resources opposing threats to birds, and in doing so, opposing threats to communities and global warming. The RSPB's new nature reserve at Cliffe Pools, which is an essential stopover for thousands of migrating birds (peaking at about 200,000 waterfowl), is proposed to be developed into an airport accommodating 115 million passengers per year. This decision might encourage similar dealings with other protected areas, and would definitely add to global warming through the

unconstrained growth of air travel. This option is proposed despite the area being protected by three most rigorous pieces of wildlife legislation: a Special Protection Area (SPA), a Ramsar Site, and a Site of Special Scientific Interest (SSSI). Surprisingly, both the economic case for an airport at Cliffe and the wildlife conservation case against it, fall equally strongly against this development.

76. Rutberg, A.T. (2001). Why state agencies should not advocate hunting or trapping. Human Dimensions of Wildlife, 6, 33-37.

Abstract: This commentary suggests that state wildlife agencies should cease to advocate hunting and trapping as means of wildlife management or recreation activities for the following reasons: 1) aggressive advocacy of lethal control of wildlife promotes destructive attitudes about nature, 2) it encourages the predispositions of many urban residents to view local wildlife as pests and undermines agency credibility, and 3) it fails to address the most serious problems facing wildlife today. By advocating hunting and trapping, these interests divert attention from the more serious issue of protecting habitats. The author promotes compassion towards animals as more likely to foster widespread public support for wildlife and habitat protection compared to the advocacy of lethal control.

77. Sargent-Michaud, J., & Boyle, K.J. (2002). Public perceptions of wildlife management in Maine. Human Dimensions of Wildlife, 7, 163-178.

Abstract: The importance of this study lies in two areas. First, agencies that do use public opinion in decision-making and policy development often enjoy high public support. Second, no study has looked at the collective considerations of public knowledge and satisfaction with management activities. Authors of this article investigate public's knowledge and opinions regarding wildlife management in Maine, using a mail survey of adult resident sample obtained from the Maine Department of Motor Vehicles. The sample included 5,000 individuals with a driver's license, representing over 90% of the adult population in Maine. The study found that respondent knowledge of who actively manages wildlife in Maine exceeds that of several other states, although high agency recognition does not always translate into equally high ratings of satisfaction with agency's management activities. More than 25% did not know the answers to factual questions, yet most gave opinions on how management should be conducted. Based on the low ratings of satisfaction and the lack of knowledge, the study emphasizes the need for increased public education regarding management efforts.

78. Scace, R.C., Grifone, E., & Usher, R. (1992, March). Ecotourism in Canada. SENTAR Consultants Ltd. Minister of Supply and Services Canada, Canadian Environmental Advisory Council.

Abstract: Authors of this report speak solely about ecotourism in Canada. They discuss ecotourism's place in the debate of tourism and sustainable development, the role of the Canadian Environmental Advisory Council (especially for ecotourism in protected areas), the definitional approaches, the needs of and opportunities for ecotourism in Canada, the establishment of codes of ethics for ecotour operators and participants, and the scope of public policy to incorporate ecotourism as a viable use of natural and cultural resources. Specific to bird watching, the report states that the economic expenditures associated with this activity are

estimated to be over \$20 billion each year in North America. Point Pelee National Park alone received more than 57,000 gate visits by bird watchers in May of 1987. The profile of these bird watchers is that of highly educated and employed in professional occupations. The researchers estimated that bird watching at Point Pelee in 1987 contributed \$6.3 million in net economic value, including local expenditures and also economic measures of satisfaction.

79. Scott, D. (2000). Exploring the diversity among wildlife watchers and birdwatchers. [On-line]. Available: www.prr.msu.edu/trends2000/pdf/scott.pdf

Abstract: This commentary provides current information about wildlife viewers and birders to individuals who are involved in the nature tourism industry. The author seeks to describe the size of both the wildlife viewing and bird watching markets, and to explore the diversity among these groups. Sources of data include the *1996 National Survey of Fishing, Hunting and Wildlife-Associated Recreation* (NSFHW); the *1996 National Survey on Recreation and the Environment* (NSRE); and other studies conducted in recent years. The Bureau of Outdoor Recreation (BOR) first analyzed bird watching as a separate activity from general wildlife viewing in 1965, estimating that there were 7.1 million birders in America. The NSRE suggests that birding has increased by 155% between 1982 and 1995. In exploring the heterogeneity among birders, the author examines various typologies designed by Kellert (1985), McFarlane (1994, 1996), and Scott et al. (1996), all of which suggest that birder categorization scheme can be arranged along a continuum from casual to highly involved. Serious or advance birders comprise only a small segment of the wildlife viewing segment, whereas many less advanced birders are also interested in destination features beyond bird watching.

80. Scott, D. (2004). Trends in outdoor recreation and nature tourism: Implications for South Texas and Northern Mexico. [On-line]. Available: <http://cnrit.tamu.edu/cgrm/whatzhot/monterrey/scott.html>

Abstract: The author of this paper believes that nature tourism is neither a panacea nor a quick fix in solving community economic problems. This commentary identifies different societal and demographic factors that influence people's participation in outdoor recreation and nature tourism, it examines trends in outdoor recreation participation in the U.S. and Texas, and it explores the diversity among bird watchers. The author examines various societal and demographic factors that are likely to influence people's participation in outdoor recreation and nature tourism activities, such as population changes, aging of population, increase in the number of minorities, changes in family structure, changes in technology, stable work week, growing sense of time scarcity, and increased diversity in the meaning of outdoor recreation. Among the series of U.S. government studies conducted to monitor trends in outdoor recreation, the most recent is the 1994-1995 National Survey on Recreation and the Environment (NSRE). According to this study and in terms of absolute numbers, bird watching grew 155%. The author developed a typology of birders based on the importance they attached to characteristics of visited places. Using factor and cluster analysis, the author identified the following groups of birders: 1) heritage recreationists, 2) outdoor recreationists, 3) generalists and water seekers, and 4) serious birders (14%). As such, birders and wildlife viewers constitute a diverse group of nature tourists with varying levels of interests, skills, and expectations.

81. Scott, D., Ditton, R.B., Stoll, J.R., Eubanks, Jr., T.L. (2005). Measuring specialization among birders: Utility of a self-classification measure. Human Dimensions of Wildlife, 10, 53-74.

This article seeks to determine the usefulness of a self-classification measure of recreation specialization in predicting motivations for participation by birders in the annual crane migration across the Platte River, Nebraska. The categories of the measure span from committed birders, to active birders, and casual birders. Factor and cluster analyses were used to divide respondents into categories of high, medium and low specialization (according to behaviour, skill, and commitment items); and to create another multi-item indicator of specialization. All three measures were significantly related to motivations, although the self-classification measure of specialization was stronger in predicting activity-specific motivations.

82. Scott, D., & Thigpen, J. (2003). Understanding the birder as tourist: Segmenting visitors to the Texas hummer/bird celebration. Human Dimensions of Wildlife, 8 (3), 199-218.

Abstract: This article investigates the conceptualization of bird watchers as a heterogeneous group. The authors use recreational specialization as a conceptual framework to identify four groups of visitors to a popular birding festival. Through cluster analysis they were classified as 1) casual birders, 2) interested birders, 3) active birders, and 4) skilled birders. Specialization was measured in terms of behaviour, level of skill, and commitment. Results indicate that these groups differ in terms of their behavioural involvement and setting preferences. Respondents were mostly women (74%), over 46 years of age (66%), married (75%), university graduates (57%), and with middle to upper household incomes. Both skilled and active birders reported having traveled significantly more miles to birdwatch than casual and interested birders. Skilled birders reported birdwatching for more years, owned more field guides, spent more money on birdwatching, and had recorded more bird species on their lists. All four groups placed great importance on destination attributes that facilitate opportunities to observe flora and fauna, and that provide contrast to urban areas. The groups differed on the importance assigned to localities that provide access to heritage recreation, where the casual and interested birders were more likely to participate. Active birders also attached importance to localities that were close to water.

83. Sekercioglu, C. H. (2002). Impacts of birdwatching on human and avian communities Environmental Conservation, 29 (3), 282-289.

Abstract: This article addresses the role of birdwatching as a vehicle for community-based conservation, looking at birdwatchers as ideal ecotourists in this regard. The author offers a review of the economic potential of non-residential birdwatching, outlines potential benefits and problems associated with avitourism, and provides recommendations to improve its conservation value. The author sees much potential in avitourism for the betterment of financial and environmental aspects of local communities, education of these communities on the value of biodiversity, and the creation of various national incentives for the protection and preservation of wild areas which support this activity. The major shortcomings according to this article are in the lack of research on the topic area, especially in regards to the economical and environmental impacts of birdwatching, such as meagre financial contribution to local communities and disturbance to wildlife.

84. Seong-Seop, K., Scott, D., & Crompton, J.L. (1997). An exploration of the relationships among social psychological involvement, behavioral involvement, commitment, and future intentions in the context of birdwatching. Journal of Leisure Research, 29 (3), 320-341.

Abstract: This study was designed to identify relationships among measures of social psychological involvement, behavioural involvement, and commitment. Using factor analysis, five general categories of behavioural involvement were revealed: 1) reading behaviour and memberships, 2) identification of birds, 3) birding behaviour in Texas, 4) birding behaviour outside of Texas, and 5) consumptive behaviour. Commitment and social psychological involvement appear to measure different facets of individuals' participation in birdwatching. Findings revealed that behavioural measures of involvement are likely to be substantially more useful in predicting birders' intentions than measures of social psychological involvement and commitment. In specific, the results showed the effectiveness of two social psychological, behavioural involvement, and commitment scales in predicting intentions to go on birding trips, visit birding sites, and attend a birding festival. Authors suggest that while birders and other recreationists may be passionate about and derive enjoyment from their leisure activities, they may not necessarily be serious about them. The best possible scenario would incorporate behavioural involvement, psychological involvement, and commitment used simultaneously to predict future intentions.

85. Spink, J. (1994). Leisure and the environment. London, UK: Butterworth Heinemann.

Abstract: This book examines the relationship between urban and rural leisure in Britain, and targets number of central issues of the 1990s. The author looks at some historic and contemporary leisure environments and lifestyles—both urban and rural—in the context of spatial distribution of leisure activities, policy-making, and politics. Major issues and problems addressed in this book include: the growth of retail centres, competition for playing space, demand for recreation in agricultural rural areas, visitor pressures, and the maintenance of tourist-attractive city image. Chapter 3, *Leisure in Rural Areas*, relates most closely to the area of nature-based recreation and National Parks. Unlike Canada, rural areas in England and Wales contain about 10% of the population on 90% of the land, where much demand for recreation is generated by visitors while the local populations are ill-served. Conflicts arise because majority of rural land is assigned to non-leisure uses, such as agriculture or forestry. Protected areas of England and Wales include National Parks, Broads Authority, Areas of Outstanding Natural Beauty and other national scenic areas, where many costs for these natural leisure environments fall upon the rural communities while mainly benefiting the distant urban populations, presenting a cost and benefit mismatch. However, only about 20% of the urban population use the countryside frequently, who tend to be under 40 years of age, professional car-owners—driving and outing accounting for most common activities in the countryside. Rural recreation pursuits tend to reinforce inequalities in leisure. The author further accounts for conflicting rural land uses (agriculture, quarrying, forestry, water, wind energy, visitors/tourism, housing/community), the pressures on rural recreation areas and resulting ecological impacts of leisure use, the politics of rural recreation including various interest and promotional pressure groups, and the issue of rural diversity (i.e. suburban fringe or Green Belts, rural areas, remote areas).

86. Thomas, D.H.L., Ayache, F., & Hollis, G.E. (1991). Use and non-use values in the conservation of Ichkeul National Park, Tunisia. Environmental Conservation, 18 (2), 119-130.

Abstract: Ecological economics has been used to justify the establishment of nature reserves with a mixture of values which can be quantified and ascribed monetary value with varying ease. In this respect, total economic value equals the sum of use value, option value and existence value. This paper examines the originally established non-use and existence values of Ichkeul National Park in northern Tunisia amidst its wetlands being threatened by dam construction. The lake and marshes of Ichkeul have a number of important values and functions, such as livestock grazing, fisheries, tourist resource, water-table recharge, treatment of sewage, water purification, education, and research. Tourism is based on wetland values, including bird-watching. Visitor surveys have shown that foreign tourists come to visit the park particularly for its ornithological values. In five-week period of 1988 (March and April), more than 200 visitors out of 2,500 came from abroad to see birds. The paper concludes that in developing nations, conservation will be more successful if promotion is based upon economic and use values, rather than non-use values.

87. Tourism Canada. (1995, February). Adventure travel in Canada: An overview of product, market and business potential. Ottawa: Industry Canada., Tourism, Canada Directorate.

Abstract: The objectives of this government study are to create an inventory of adventure travel operations in Canada; describe the current state of adventure travel sector; evaluate its primary target markets and the specifics of each; identify key factors and issues which affect the evolution of the adventure travel sector; identify its principal competition; evaluate its performance on a national and provincial/territorial basis; identify trends and business practices of the adventure travel sector by regions; and offer measures for increasing efficiency, productivity and competitiveness. This national study was conducted over a 12-month period, from November 1993 to October, 1994. Among its activities in industry structure,, this study encompasses bird watching as one of many wildlife viewing activities.

88. US Fish & Wildlife Service. (1991; 2001). Birding in the United States: A demographic and economic analysis report.

Abstract: The report has some valuable information on resident birders and those traveling to different states (Montana is one of the top destinations). Found at:
http://library.fws.gov/nat_survey2001_birding.pdf

89. Varcoe, A., Preston, F., & Byrne, N.P. (1985). Island penguin reserve: Survey of visitor use, expectations and satisfactions. A report for the Phillip Island Penguin Reserve Committee of Management. Victoria, Australia.

Abstract: This consultants' report examines many issues relevant to the Phillip Island Penguin Reserve in Victoria, Australia. The reserve attracts thousands of visitors each year to view Little Penguins. The report examines promotion and visitation patterns of tourists, their expectations and satisfactions, specific management issues in the reserve, and many recommendations for visitor facilities and services.

90. Vaske, J.J., Wittmann, K., Williams, T.V., Hardesty, K., & Sikorowski, L. (2001). Wildlife viewing in Colorado: A review and synthesis of existing data. HDNRU Report No. 33. Fort Collins, CO: Human Dimensions in Natural Resources Unit, College of Natural Resources, Colorado State University, & Colorado Division of Wildlife.

Abstract: This extensive technical report consolidates findings from 10 wildlife viewing studies conducted in Colorado between 1990 and 1996. The surveys represent a range of user groups including wildlife viewers, hunters, anglers, and general public from across the state. In total, 10,374 individuals completed the various surveys. This report strives to synthesize what is currently known regarding wildlife viewing recreation, provide a summary of wildlife viewing information to support planning, and identify knowledge gaps to facilitate wildlife viewing management. Results indicate that over half of the respondents traveled specifically to view wildlife, although nearly all reported enjoying wildlife around their home or while participating in other recreation activities. Participation in wildlife viewing exceeded participation in hunting and fishing in all studies, whereas bird watching increased from 35% in 1990 to 55% in 1995. This type of comparative analysis can facilitate planning, implementation, and evaluation of wildlife-related programs and projects.

91. Veal, A.J. (2002). Leisure and tourism policy and planning. 2nd Ed. London, UK: CABI Publishing.

Abstract: This book aims to bridge the gap between theory and practice that has developed in areas of leisure and tourism studies. The origins of the book derive from the author's teaching of public policy at several universities in Birmingham, London and Sydney. While much of this volume is general in nature, it relates particularly to the institutional setting and experiences of Britain and Australia. The book contains 11 chapters, beginning with an introduction to government roles in the policy making and planning for leisure and tourism. Chapter 2 examines various matters within the scope of leisure and tourism, such as human rights, citizen rights, needs, and public policy. Chapter 3 discusses the role of state in the context of several political ideologies including conservatism, liberalism, Marxism, democratic socialism, social democracy, feminism, environmentalism, and antiglobalism. In comparing market to state, Chapter 4 examines capitalism and mainstream economics, types of market failure, social and political arguments for government involvement, and mainstream economic ideology. Chapter 5 describes public policy-making, the role of formal constitutions, various models of decision-making, urban regimes, and governance of the local state. Chapter 6 concentrates on leisure and tourism planning, including the strategic planning process and land-use planning approaches. Chapter 7 addresses planning techniques and approaches, following by forecasting techniques of leisure and tourism demand in Chapter 8. Chapter 9 describes economic evaluation techniques, such as cost-benefit analysis and economic-impact analysis. Chapter 10 examines approaches to performance evaluation, and Chapter 11 discusses policy and planning for particular leisure and tourism sectors and for groups. Questions and exercises are provided at the end of each chapter and a web site has been established which contains downloadable versions of graphics, tables, updates, and further reading material.

92. Vining, J. (Ed.). (1990). Social science and natural resource recreation management. Social behaviour and natural resources series. Oxford: Westview Press.

Abstract: This book addresses the incorporation of human management as opposed to resource management, in the context of recreational use of parks, wilderness, and other natural areas. Wider recognition of human and social factors has driven the use of social science theory and data in improving recreational experiences without the damaging impacts on natural resources. The authors examine conceptual foundations of recreational resource management, through various case study examples and social science approaches. Among the topics addressed by the case studies are the assessment of user experiences, preferences, and values attributed to natural resource recreation, the interactions among recreationists, local populations and agencies, and marketing resource recreation in tourism.

93. Vogel, J.H. (1997). The successful use of economic instruments to foster sustainable use of biodiversity: Six case studies from Latin America and the Caribbean. Biopolicy Journal, 2 (5), 1-44.

Abstract: This study points to fundamental theoretical problem in methodology of the Samuelsonian equation for the optimal allocation of public goods, which is a theoretical construct for conservation of biological diversity. Mainly, preferences are unstable over human generations and any recommendation based on current preferences may turn out to have underestimated the values resulting from the preferences of future generations. The physical scope of protected areas should be determined by safe minimum standards (i.e. the precautionary principle) as opposed to the economic criteria. The author suggests that six distinct categories of value can be simultaneously generated from conservation, although seldom will any one of those be sufficient to justify the opportunity costs of the economically more profitable activities that would exterminate biological diversity. The six distinct categories of value include: existence, ecotourism, environmental services, sustainable agriculture, extractivism, and bioprospecting. Challenge for conservation lies in creating a package of sustainable activities that in total can alleviate the economic and political pressures to relax or abandon safe minimum standards.

94. WBM Oceanics Australia, & Claridge, G. (1997). Guidelines for managing visitation to seabird breeding islands. Townsville, Queensland, Australia: Great Barrier Reef Marine Park Authority, & Environment Australia-Biodiversity Group.

Abstract: These guidelines developed for the Australian government provide a comprehensive framework for developing and implementing site-specific management measures to eliminate the negative effects of visitors on sensitive seabird nesting areas. A background section contains information on the vulnerability of seabirds to disturbance, describing the mechanisms by which disturbance can cause breeding failure. Information is provided on how to value seabird breeding aggregations such as the presence of rare or threatened species, the size of the breeding population compared with other populations in the region and the extent to which the aggregation provides opportunities for ecotourism and environmental education. The following chapter describes the nature of seabird breeding, their aggregations, nesting locations, clutch size, replacement laying, and when they breed. Chapter 3 addresses the vulnerability of breeding seabirds to human activities, including physical, physiological, and ecological impacts of visitation. Issues discussed in this chapter include sensitivity differences between species, critical

approach distances, desertion, shifts in colony distribution, delayed breeding, predation, exposure, stampedes, interruption to feeding, and stress effects and habituation. Following section examines the development and implementation of appropriate management measures. In this respect, Chapter 4 discusses different approaches to valuing seabird breeding aggregations. Chapter 5 examines impact sources from tourism, recreation, boating, fishing, navigational aids and meteorological stations, defence activities, aircraft, and research activities, in suggesting control or mitigation measures. Chapter 6 addresses the identification of management concerns related to seabird breeding biology, to the attributes of the islands, and to species and groups. The last Chapter looks at the implementation of guidelines through codes of conduct, site hardening, closure, signage, publicity tools, wardening and volunteering, permits, monitoring of seabird breeding, training, accreditation schemes, education, liaison with other agencies, and improvement of management measures. The report recommends the undertaking of research to determine critical approach distances for a range of species and settings, so that more precise guidelines can be developed in the future.

95. Weaver, D.B., Backman, K.F., Cater, E., Eagles, P.F.J., & McKercher, B. (Eds.). (2001). The encyclopedia of ecotourism. New York, NY: CABI Publishing.

Abstract: This book is a compilation of individual studies addressing various issues related to ecotourism. The studies address many cross-disciplinary topics of management, impacts, resource base, theoretical underpinnings, and research needs. To a lesser degree, some studies address bird watching as one of nature-based and ecotourism activities, although there is much attention given to management of human-wildlife interaction. Well organized into 41 chapters (each being a separate study) and easily read, this book offers a current perspective on tourism and ecotourism research. In particular, chapter 3 discusses the heterogeneity of ecotourism and in it nature-based tourism, wildlife viewing, and bird watching. The complexity of conceptualizations of who is an ecotourist is compounded by the geographical location of the ecotour operator or the destination and the origin of the ecotourist. The last chapter (41) addresses important areas and needs of ecotourism research through the theoretical underpinnings of this young field. Very user-friendly, the pages of glossary introduce the reader to a unified definitional perspective of important concepts.

96. Welch, D. (1995). Managing public use of parks, open spaces and countryside. London, UK: Pitman Publishing.

Abstract: This concise book is an essential guide to the problems and opportunities that arise in the management of public use of parks, both urban and in the countryside. It provides up-to-date information on management of the expanding leisure services field. The first chapter examines management issues, such as benchmarking, synergy, benefits-based management, aims of park provision, and management by objectives. Chapter two examines issues related to customer care, including safety, volunteers, equal opportunity, disabilities, and costs. Chapter three examines issues pertaining to law and order, such as the breaking of law, parks police forces, inspections, alternative forms of supervision, vandalism, firearms, road traffic, and dogs. Chapter four discusses the many roles and responsibilities of urban parks, among which are recreational uses like cycling or rollerblading, management, staffing and park keeping, and customer surveys. The final chapter investigates the roles and responsibilities of parks in the countryside, with discussions on community forests, vehicle access, wildlife, open spaces, nature conservation, and

water. The author believes the prime concern of park management is caring for parks in a way that visitors can fully enjoy them in safety and delight.

97. Wilcox, S.A. (1995). Bird and nature conservation planning: A financial and human ecological approach, the case of Long Point. Masters Thesis. School of Urban & Regional Planning, University of Waterloo, Waterloo, Ontario, Canada.

Abstract: The underlying assumption of this thesis is that financial information can demonstrate the importance of environment and conservation in ways different from but supportive of ecological and aesthetic information. This thesis examines the internationally recognized natural area of Long Point in order to discuss its significance for birds, the socioeconomic and political character of the area, and the case for a financial approach; to undertake an interview survey of economic, social, demographic, recreational and related human ecological information on visiting birders; and finally to report and interpret the results for conservation and planning purposes. Results indicate a considerable economic return for the area, indicate opportunities for increasing income, and support the need to conserve key habitat if sustainable development of nature tourism is to take place. The thesis suggests a number of potential directions for increasing the level of economic activity by birders in Long Point area. These directions include additional efforts towards conservation, developing additional birding opportunities, obtaining a community naturalist, initiating a birding festival, and establishing a system to monitor numbers and characteristics of birders.

98. Woods, B. (2003, November). Birdwatching is big business! US Fish & Wildlife Service. [On-line]. Available: <http://news.fws.gov/newsreleases/>

Abstract: This news release discusses the results of a report, *Birding in the United States: A Demographic and Economic Analysis*, based on data collected for the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation. The report indicates that more than 1/3rd of Alaska residents are bird watchers, and that almost half of active birders in Alaska are visitors. 83% of non resident birders do some or all of their birdwatching on America's public lands. The contribution of 157,290 bird watchers who visit Alaska each year brings an estimated economic value of \$76,757,520. Alaska's 16 National Wildlife Refuges provide world class birding opportunities for bird enthusiasts. This popularity may be also due to Alaska's status as the Last Frontier and the chance to observe species that are rare or impossible to find elsewhere in America.

99. Zinser, C.I. (1995). Outdoor recreation – United States National Parks, forests, and public lands. New York, NY: John Wiley & Sons.

Abstract: This book is about the allocation, location, planning and management of natural resources for recreational purposes. The author stresses the importance of the legislation enacted by Congress as a primary factor determining the type of permitted recreational land-use. The main focus of this book is on federal public lands in the United States. The four principal land-managing agencies in the U.S. are the National Park Service, the Forest Service, the Fish and Wildlife Service, and the Bureau of Land Management, which have jurisdiction over 25% of the total national territory. The book contains 14 chapters, appendices of detailed data and figures, and numerous maps. Chapter 1 provides background information and basic concepts of

recreation land-use planning. Chapter 2 identifies the federal legislation responsible for current recreation programs, and the public and private recreation resource sectors and their roles in providing recreation services and facilities. Chapters 3 through 6 focus on the National Park Service and the National Park System, and Chapters 7 through 10 center on the Forest Service and the National Wildlife Refuge System. Chapter 12 chronicles the Bureau of Land Management. Chapter 13 examines the recreational resources of other federal agencies. The focus of the final Chapter 14 is on significant federal concepts for protecting amenity resources.