

FOR THE BIRDS?

Neoliberalism and the Protection of Biodiversity in British Columbia

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THE NORMATIVE CLIMATE SHAPING Canadian environmental policy changed significantly in the final two decades of the twentieth century. Strongly influenced by shifts taking place in the United States and elsewhere, these changes were most apparent in environmental management discourse and in the rhetorical strategies used by natural resource agencies anxious to legitimate their priorities and decisions. As the sustained yield-integrated resource management discourse of the 1960s and 1970s lost its potency, those seeking to justify resource management decisions drew more and more frequently on the ascendant biodiversity discourse.¹ Policy makers filled their speeches and briefs with phrases from the ecosystem management lexicon, leaving environmental policy analysts to ponder the gulf between rhetoric and substantive policy outputs.²

For those interested in promoting effective environmental policy, the last two decades have brought another important package of changes. In Canada, as elsewhere, the triumph of neoliberal ideology³

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¹ Jeremy Wilson, *Talk and Log: Wilderness Politics in British Columbia, 1965-96* (Vancouver: UBC Press, 1998), 13-16 and chap. 10.

² Jeremy Wilson, "Talking the Talk and Walking the Walk: Reflections on the Early Influence of Ecosystem Management Ideas," in *Canadian Forest Policy: Adapting to Change*, ed. Michael Howlett (Toronto: University of Toronto Press, 2001), chap. 3.

³ As defined by Stephen McBride, "The essential features of neo-liberalism ... rest in its determination to reduce and alter the role played by the state in human affairs. Instead, neo-liberalism emphasizes market mechanisms and individual rather than collective approaches to solving or handling economic and social problems. Neo-liberalism thus restricts the scope

has significantly reduced state capacity, compelling policy makers and advocates to examine priorities and reflect on the possibility of "governance without government."⁴ Across Canada, staff and budget cuts at many environment and natural resource agencies have exceeded 30 percent,⁵ precipitating much debate over whether biodiversity can be adequately protected under conditions of declining state capacity.

This article contributes to these debates by examining efforts to conserve BC birds. Its conclusions are based on three interlocking pieces of analysis: the first focuses on the province's birds and the threats shaping their prospects; the second explores the characteristics of the BC bird conservation community; and the third considers the assortment of policies and initiatives developed to protect BC birds and biodiversity. Building on the argument that the province's avian diversity will continue to be shaped by interactions among these three constellations of conditions and forces, the article identifies some causes for concern about the prospects for the province's birds. It argues that a core set of worries can be linked to arguments about the effects of inadequate and declining state capacity.

There are, of course, limits to our ability to generalize from this case to conclusions about prospects for strong biodiversity protection in British Columbia and elsewhere. Birds have some advantages over other species: they have long been the object of strong conservationist concern and, in the case of many migratory species, strong transnational initiatives. They are extensively monitored and studied. They benefit from the devoted work and support of broad scientific and hobbyist constituencies, both of which draw significant portions of their support from strata of society generally regarded as politically influential. British Columbia's birds are especially fortunate in that they often benefit, at least indirectly, from the efforts of the province's robust environmental movement. Any inclination to generalize from positive results, then, should be tempered by reflection on the exceptional characteristics of

of 'politics,' preferring more issues to be settled by individuals themselves or by individuals interacting in the market place." See McBride, *Paradigm Shift: Globalization and the Canadian State* (Halifax: Fernwood, 2001), 14.

⁴ B. Guy Peters and Jon Pierre, "Governance without Government? Rethinking Public Administration," *Journal of Public Administration Research and Theory* 8, 2 (1998): 223-44. See also R.A.W. Rhodes, "The Hollowing Out of the State: The Changing Nature of the Public Service in Britain," *Political Quarterly* 65, 2 (1994): 138-51; and Ian Holliday, "Is the British State Hollowing Out?" *Political Quarterly* 71, 2 (April 2000): 167-76.

⁵ See, for example, J. Alexander Burnett, *A Passion for Wildlife: The History of the Canadian Wildlife Service* (Vancouver: UBC Press, 2003), 285; and Anita Krajnc, "Wither Ontario's Environment? Neo-Conservatism and the Decline of the Environment Ministry," *Canadian Public Policy* 26, 1 (2000): 111-27.

the case. On the other hand, pessimistic conclusions about prospects for British Columbia's birds would have to imply a gloomy prognosis for other species and other jurisdictions.

BIRDS, THREATS, CHALLENGES

According to the *Birds of British Columbia*, 484 species of birds are known to have occurred in the province.⁶ About one-quarter of this total are either extirpated, extinct, or classified as irregularly occurring "vagrant" species. Of the 356 species that occur regularly, 309 have been reported nesting here.⁷ Sixty percent of these breeding species (182) remain in the province year-round, while the remainder are summer visitors. These 126 non-resident breeders are joined on the list of migrants by thirty-seven non-breeding species that visit the province for parts of the year or pass through during the spring and/or fall migrations.⁸ Over 200 species regularly winter in the province.⁹ Species richness varies from region to region. The Southern Interior ecoprovince (particularly the Okanagan Valley) has the greatest variety of breeding species; the Georgia Depression ecoprovince has the highest counts for winter occurrences and total species.¹⁰ Globally or nationally, British Columbia hosts significant proportions of many species. The province provides breeding requirements for 20 percent or more of the global populations of at least twenty-one species and "supports the only nesting populations in Canada of about 34 indigenous species."¹¹ In addition, British Columbia provides critical stopover sites for many migratory birds, including such species as the Western Sandpiper.

⁶ Ian McTaggart-Cowan, Neil K. Dawe, R. Wayne Campbell, and Andrew C. Stewart, "Avian Biodiversity, Ecological Distribution, and Patterns of Change," in *The Birds of British Columbia*, vol. 4, ed. R. Wayne Campbell, Neil K. Dawe, Ian McTaggart-Cowan, John M. Cooper, Gary W. Kaiser, Andrew C. Stewart, and Michael C.E. McNall (Vancouver: UBC Press, 2001), 634.

⁷ The total number of species currently recorded as having occurred in the province is over 100 higher than the number listed in a comprehensive 1947 catalogue by J.A. Munro and Ian McTaggart-Cowan. This increase reflects factors such as changes in species categorization or listing criteria, along with increases in the intensity and scope of bird observation efforts. As well, though, it is a consequence of the continuing recolonization of the province on the part of birds pushed out by the last glacial advances. See Campbell et al., *Birds of British Columbia*, vol. 4, 633 and 636; and J.A. Munro and Ian McTaggart-Cowan, *A Review of the Bird Fauna of British Columbia* (Victoria: BC Provincial Museum, 1947), cited in Campbell et al. *Birds of British Columbia*, vol. 4, 633.

⁸ McTaggart-Cowan et al., "Avian Biodiversity," 634-5. On major migration routes and staging areas, see 660.

⁹ *Ibid.*, 651.

¹⁰ *Ibid.*, 652-60.

¹¹ *Ibid.*, 677. See also 676-8.

Global trends indicate significant problems for many of the world's bird species. A 2000 study by Birdlife International estimated that 12 percent of bird species are critically endangered, endangered, or vulnerable and that another 75 percent fall into the "near-threatened" category.¹² The National Audubon Society estimates that over one-quarter of US birds are declining or in danger. North American Breeding Bird Survey (BBS) records show 28 percent of 403 thoroughly monitored species declining between 1966 and 1998.¹³

In British Columbia, as elsewhere, knowledge of species densities has lagged behind knowledge of species richness.¹⁴ According to the *Birds of British Columbia*, "The studies of bird density ... are few in number compared to the complexity of the habitat. Thus few generalizations of biological significance can be made."¹⁵ Efforts to piece together a picture of change in BC bird numbers usually start with the Breeding Bird Survey results. According to the *Birds of British Columbia*, however, only 234 of the 309 bird species known to have bred in British Columbia have been detected by the BBS. Of the 60 BBS-surveyed species showing statistically significant changes in populations between 1968 and 1993, 28 species were in decline.¹⁶ Trends for species not covered by the BBS – "marine species, most of the raptors, the waterfowl, or the varied group of subalpine and alpine nesters"¹⁷ – can only be estimated, but a full inventory of species showing significant declines would be significantly longer than the BBS-based list.¹⁸

¹² Alison J. Stattersfield and David R. Capper, eds., *Threatened Birds of the World* (Barcelona: Lynx Edicions, 2000), 2–20, cited in Howard Youth, *Winged Messengers: The Decline of Birds* (Washington, DC: Worldwatch Institute, 2003), 9–10.

¹³ Youth, *Winged Messengers*, 12.

¹⁴ McTaggart-Cowan et al., "Avian Biodiversity," 661. The authors illustrate by citing the problems encountered by those trying to determine species densities of forest birds, noting various methodological issues raised by attempts to develop a census of forest birds.

¹⁵ *Ibid.*, 663–4; see 667 for some elaboration on biogeoclimatic zones for which the information is inadequate.

¹⁶ *Ibid.*, 669. The authors describe the BBS as "the only source of continent-wide information on the breeding populations of North American birds." Of the twenty-eight species declining (see Table 33, p. 670), ten appear to be declining in British Columbia but not elsewhere.

¹⁷ *Ibid.*, 669.

¹⁸ For example, the BBS list does not include any of the species singled out by Ducks Unlimited's observation that "population data from 1967–69 and 1987–98 suggest that mallards, northern pintails, blue-winged teal, common goldeneyes, ruddy ducks, harlequin ducks, common mergansers, and red-breasted mergansers have markedly declined in abundance in BC during the last 30 years." Ducks Unlimited Inc., *Ducks Unlimited's Conservation Plan: Meeting the Annual Life Cycle Needs of North America's Waterfowl* (Memphis: Ducks Unlimited, 2001), 48. Likewise, a full list of species in decline would no doubt reflect expert opinion that "fully two-thirds of Canada's shorebird populations show downward trends according to survey data." See Garry Donaldson, Colleen Hyslop, Guy Morrison, Loney Dickson, and Ian Davidson, eds., *Canadian Shorebird Conservation Plan* (Ottawa: Minister of Environment, Canadian Wildlife Service, 2000), i.

Assessments of species at risk provide another set of perspectives on how the province's birds are doing. Both the provincial and federal governments support highly respected systems for performing these assessments, with British Columbia's grounded on the work of the Conservation Data Centre (cdc)¹⁹ and Canada's based on the work of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).²⁰ Applying a national perspective, COSEWIC lists twenty-one species or subspecies of indigenous BC birds as endangered, threatened, or of special concern.²¹ Several others are currently on COSEWIC's candidate list awaiting assessments. By contrast, the CDC, which takes into account status within British Columbia, Red-Lists forty-four species and subspecies of birds as extirpated, endangered, or threatened. It Blue-Lists an additional forty-nine species of special concern. Interestingly, as the *Birds of British Columbia* points out, few of the species on the BBS-based list of birds showing population declines are rare enough to be on the provincial Red or Blue Lists.²²

¹⁹ Established in 1991, the CDC is now part of the Ministry of Sustainable Resource Management. The CDC ranks species on the basis of a number of factors, including estimated number of "occurrences" ("locations representing a habitat which sustains or otherwise contributes to the survival of a population"), estimated population sizes and trends, geographic distribution, and actual or potential threats. See BC, Conservation Data Centre, "Species Ranking in British Columbia," at <<http://wlapwww.gov.bc.ca/wld/documents/ranking.pdf>> (viewed 11 June 2003). Since 1992 the CDC's species rankings have been used as a basis for the province's Red and Blue Lists. The Red List includes "any indigenous species, subspecies or plant community that is Extirpated, Endangered, or Threatened in British Columbia. Endangered elements are facing imminent extirpation or extinction. Threatened elements are likely to become endangered if limiting factors are not reversed." Blue-listed species include "any indigenous species, subspecies or community considered to be Vulnerable (Special Concern) in British Columbia. Vulnerable elements are of special concern because of characteristics that make them particularly sensitive to human activities or natural events." See BC, Conservation Data Centre, "Provincial Red and Blue Lists" at <<http://srmwww.gov.bc.ca/atrisk/red-blue.htm>> (viewed 11 June 2003). See also B. Harper, S. Cannings, D. Fraser, and W.T. Munro, "Provincial Lists of Species at Risk," in *Biodiversity in British Columbia*, ed. L.E. Harding and E. McCullum (Delta, BC: Canadian Wildlife Service, 1994), 16-23. For additional perspectives on the meaning of the Red and Blue Lists, see McTaggart-Cowan et al., "Avian Diversity," 675-7.

²⁰ Since its inception in 1977, COSEWIC has met annually to revise a national list of species at risk. It distinguishes among several categories: extirpated (species no longer existing in the wild in Canada but occurring elsewhere); endangered (species facing imminent extirpation or extinction); threatened (species likely to become endangered if limiting factors are not reversed); and "of special concern" (species particularly sensitive to human activities or natural events but not endangered or threatened). See Canada, Committee on the Status of Endangered Wildlife in Canada, "Species Listing: Species Definitions and Status Categories," at <http://www.cosewic.gc.ca/eng/sct0/Assessment_process_tlb16_e.cfm>; and COSEWIC, "About Us," at <http://www.cosewic.gc.ca/eng/sct6/sct6_1_e.cfm> (viewed 5 August 2003).

²¹ As of August 2003, current lists can be generated at the BC Species and Ecosystems Explorer site: <<http://srmapps.gov.bc.ca/apps/eswp/>> (viewed 8 August 2003). The COSEWIC list includes several other species or subspecies of BC birds that are "accidental" or introduced.

²² McTaggart-Cowan et al., "Avian Biodiversity," 676-7.

Habitat loss is the main threat to bird populations in British Columbia and elsewhere. Numerous important BC habitat types have been badly degraded as a result of human population growth and economic development.²³ For example, provincial government analyses estimate that over 60 percent of South Okanagan antelope-brush grasslands have been lost. Losses of Southern Vancouver Island garry oak woodlands and Lower Fraser Valley wetlands stand at 95.1 percent and at 64.2 percent, respectively.²⁴ Although most serious in heavily populated southern areas, habitat degradation is a reality across the province. For example, at least five million hectares of forests were clearcut in the last century,²⁵ while impoundments behind major dams, such as the Williston Reservoir in the north centre of the province, obliterated significant amounts of prime riparian habitat.²⁶ Habitat loss continues to occur at a rapid rate. In a 2003 study of government policies affecting Marbled Murrelets, for instance, the BC Forest Practices Board concluded that, because of logging, 44 percent of the areas identified as potential conservation zones in one forest district in 1995 are now of doubtful viability.²⁷

Habitat degradation, of course, has scores of causes, including logging and road building by the forest industry, mineral exploration and development, climate change, suburban and hobby farm sprawl, hydroelectric generation and transmission projects, expansion of agriculture and grazing, all-terrain vehicle use and other harmful recreational activities, and industrial installations such as the Roberts Bank Terminal. Migratory species are vulnerable to additional threats, ranging from the clearing of mangroves in South America to oil development and attendant pollution along the coasts of various countries.

A map of the full threat complex facing BC birds would be even more extensive. Birds are negatively affected by pollution (e.g., chronic exposure to marine oil contamination, chemical pollution of the mussels that form an important component of Surf Scoter diets,²⁸ or organo-

²³ Dennis A. Demarchi and Raymond A. Demarchi, "Wildlife Habitat: The Impacts of Settlement," in *Our Wildlife Heritage: 100 Years of Wildlife Management*, ed. Allan Murray (Victoria: Centennial Wildlife Society of British Columbia, 1987), 159-77.

²⁴ BC, Ministry of Water, Land and Air Protection, State of Environment Reporting, "Status of Selected Habitats in British Columbia," at <<http://wlapwww.gov.bc.ca/soerpt/#habitat/glost.html>> (viewed 5 May 2003).

²⁵ Jeremy Wilson, *Talk and Log*, xiii.

²⁶ Nancy Baron, "On a Wing and a Prayer," *Georgia Straight*, 5-12 December 1996, 20.

²⁷ British Columbia, Forest Practices Board, *Marbled Murrelet Habitat Management: Considerations for the New Forest and Range Practices Act - Special Report* (Victoria: Forest Practices Board, January 2003), 5-6.

²⁸ Larry Pynn, "Surf Scoters' 'Doughnut' Diet Needs Urban Marine Protection," *Vancouver Sun*, 4 May 2001. See also Alanna Mitchell, "The Case of the Missing Ducks," *Globe and Mail*, 16 August 2003.

chlorine and heavy metal accumulations in the fatty tissue of shorebirds); alien species invasions (such as weed invasions degrading grasslands habitats as well as rats or other introduced predators destroying island seabird colonies); accidental mortality or “incidental take” (such as that resulting from collisions with buildings or transmission towers, fishing industry bycatch of seabirds, forest industry destruction of nests, or predation by house cats); and human disturbance (such as dog walkers disrupting shorebirds feeding at critical fattening-up stopover sites).

Forces that have one sort of impact on one species often, of course, have another sort of impact on other species. As innovative researcher Rhonda Millikin put it several years ago: “BC’s populations of birds are restructuring ... What we are losing are habitat specialists: birds that are dependent on mature forests or riparian habitat. We’re not losing birds that like clearcuts, like Lincoln’s sparrows, or birds that like agriculture, like cowbirds, or birds that like urban areas, like house sparrows and crows. These birds are doing just fine – they’re increasing!”²⁹ Writing about the prospects for global biodiversity, David Quammen has argued that restructuring processes caused by habitat degradation and other factors favour what he calls “weedy species” – that is, those that “tend to thrive in human-dominated terrain because in crucial ways they resemble *Homo sapiens*: aggressive, versatile, prolific, and ready to travel.”³⁰

THE BC BIRD CONSERVATION COMMUNITY

The loose-knit collection of agencies, non-governmental organizations (NGOs), and individuals involved in efforts to conserve BC birds consists of core and peripheral components. Without being too categorical about the boundaries between inner and outer zones, we can say that at the centre of this community are organizations and individuals wholly or primarily focused on bird conservation, including the Pacific Region Branch of Ducks Unlimited Canada, Environment Canada’s Pacific Wildlife Research Centre, the Wild Bird Trust’s Wildlife Data Centre, a handful of biologists employed in provincial government agencies or ministries, various other bird biologists (some affiliated with universities

²⁹ Quoted in Baron, “On a Wing and a Prayer,” 19.

³⁰ David Quammen, “Planet of Weeds: Tallying the Losses of Earth’s Animals and Plants,” *Harpers*, October 1998, 67. Not all species that benefit from habitat change, of course, could be considered weedy species. For example, the seagrass invasion and other ecological changes set in motion by construction of the causeways at Roberts Bank may have had detrimental impacts on shorebirds and some species of waterfowl, but they have increased food sources for Great Blue Herons. See Margaret Munro, “Grass Is Greener at Roberts Bank Causeways, But Altered Ecology May Not Be Best for Birds,” *Vancouver Sun*, 25 April 1996.

and others working – usually on a contract basis – for governments or NGOs), and a contingent of dedicated naturalists. In an intermediate ring, we might place NGOs such as the Nature Trust of British Columbia, the Land Conservancy of British Columbia, and the BC Federation of Naturalists. Their broader environmental conservation work is often motivated by concerns about loss of bird habitat or other threats to birds. Towards the periphery we find organizations from the wider environmental movement whose campaigns sometimes incorporate bird conservation goals. Here, for example, we would include groups such as the Western Canada Wilderness Committee or the Sierra Legal Defence Fund, both of which have directed significant efforts towards preservation of habitat for species such as the Spotted Owl. Several characteristics of this community have important implications for the present and future success of the bird conservation effort.

Diversity

The community is extremely diverse, both in its concerns and its approaches. The reasons are evident in the previous section – diverse species, landscapes, and threats combine to foster a wide range of conservation foci and approaches. Those concerned about the province's birds constantly grapple with difficult questions about which species and threats deserve priority. Although there has been significant progress in establishing systematic approaches to answering these questions and directing the community's energy, debate continues over whether the community's efforts are too widely dispersed across species and threats.

Diversity can, of course, mean intracommunity tensions, including ones that undermine effectiveness. Some tensions are certainly apparent, with those rooted in longstanding differences between the hunter/game bird and naturalist/non-game bird components of the community providing the best example. While shifts towards an all-bird focus have somewhat reduced tensions, some of the community's leaders continue to worry that the movement's influence is undercut by a lack of unity. For example, Trevor Swerdfager, the current director general of the Canadian Wildlife Service (and previously regional director of Environment Canada's Pacific and Yukon Region Environmental Conservation Service), offers this assessment of the Canadian bird community:

The migratory birds community is often rather tribal in nature, splitting off into various groups of people focused on their own groups of birds or program activities. While segmenting of the community is inevitable given the breadth of the migratory birds conservation world, it is distinctly

unhelpful in achieving the higher level success the migratory birds community needs. Internal competition drains resources and energies. To outside observers, the fragmentation of the migratory birds community is difficult to understand and makes the community look amateurish and disorganized. Most importantly, the skills and resources of the various groups with genuine interests in migratory birds – hunters, naturalists, government agencies and so on – are not optimally channeled and maximized.³¹

Divided jurisdiction

The community and its activities are structured by basic institutional realities. State actors are prominently placed, with the roles of different agencies and officials shaped by a complex, somewhat fluid, and continually contested division of federal-provincial jurisdiction. As in many other areas of Canadian policy, this division is the core institutional determinant of policy regime dynamics, and here, as in most other areas of Canadian environmental policy, provincial control of natural resources and most of the land base is fundamental. The federal government's jurisdiction over migratory birds, however, is also important, translating into a significant continuing role for Environment Canada and particularly for the Canadian Wildlife Service (cws). As a recent history of the cws emphasizes, from the beginning its *raison d'être* has been intimately connected to federal responsibility for migratory birds.³²

Although its jurisdiction over most of the land base puts it in a strong position to implement its broad responsibilities for wildlife, the provincial government's involvement in bird conservation has lacked coherence. Traditionally, its work with birds was led by a few game-bird-centred officials in a weak Wildlife Branch. Over the past twenty years, sporadic bouts of government concern about endangered species and biodiversity conservation have generated some institutional changes.³³

Continuing an evolution that had begun in the 1950s, when the first wildlife biologists joined its staff, the Wildlife Branch has expanded its mandate to include all birds, along with habitat inventory and management functions.³⁴ Pressure from environmentalists has forced

³¹ Trevor Swerdfager, "The Search for Equilibrium Points: Balancing the Dynamic Tensions Confronting the Future of Migratory Birds Conservation in Canada" (May 2004).

³² Burnett, *A Passion for Wildlife*, particularly chaps. 2-3.

³³ Wilson, *Talk and Log*, 72-7.

³⁴ Campbell et al., *The Birds of British Columbia*, vol. 1 (Vancouver: UBC Press, 1990), 47-50; Ian McTaggart Cowan, "Science and the Conservation of Wildlife in British Columbia," in Murray, *Our Wildlife Heritage*, 85-106; and Donald J. Robinson, "Wildlife and the Law," in Murray, *Our Wildlife Heritage*, 43-58.

the Ministry of Forests and other resource ministries to pay greater attention to impacts on birds and other species, especially those that have become poster species for broader environmental causes.

The extent of federal jurisdiction over the environment continues to be debated,³⁵ with questions about the interpretation of federal responsibility for migratory birds at the centre of one important component of the debate. During the long process leading to passage of the Species at Risk Act in 2002, for example, many environmentalists argued that much more aggressive and wide-reaching federal involvement in the protection of migratory bird habitat could be justified under the terms of the Canada-US Migratory Birds Convention and the Migratory Birds Convention Act. According to retired Supreme Court of Canada judge the Honourable Gerald V. La Forest and law professor Dale Gibson, federal authority to protect habitat derives from Parliament's power under s. 132 of the Constitution Act to implement pre-1931 "Empire Treaties" as well as from the POGG (Peace, Order and Good Government) power: "Federal authority to protect migratory birds under the Convention and s. 132 of the *Constitution* includes the power to legislate respecting preservation of their necessary habitat ... [As well, the] 'national concern' branch of the POGG power allows Parliament to address distinct environmental problems that are cross-border in nature. There can be little doubt that Parliament, under its POGG power, has the authority to protect all endangered migratory bird species and their habitat."³⁶ Provincial governments, of course, would be loath to accept views like these.

Jurisdictional debates aside, we can say that officials from the Environment Canada (cws) Pacific and Yukon Region continue to be centrally

³⁵ See Kathryn Harrison, "Federal-Provincial Relations and the Environment: Unilateralism, Collaboration, and Rationalization," in *Canadian Environmental Policy: Context and Cases* (2nd ed.), ed. Debra L. VanNijnatten and Robert Boardman (Toronto: Oxford University Press, 2002), 123-45; and David Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy* (Vancouver: UBC Press, 2003), 232, 260-3.

³⁶ The Honourable Gerald La Forest and Dale Gibson, "Constitutional Authority for Federal Protection of Migratory Birds, Other Cross-Border Species, and Their Habitat in Endangered Species Legislation" (November 1999. Unpublished opinion for Sierra Legal Defence Fund), 14, 2. In addition to advancing the argument in the campaign noted here, environmentalists have also pushed for greater federal involvement in the protection of migratory bird habitat in the Cheviot case and in a complaint filed under the citizen submission (Article 14 - 15) sections of the (Canada-US-Mexico) North American Agreement on Environmental Cooperation. See Alberta Wilderness Association, "Federal Court Rules Cheviot Mine Approval Violated Environmental Laws: Strikes Down Permit for Open Pit Mine Next to Jasper National Park," 9 April 1999 Alberta Wilderness Association News Release; and Jeremy Wilson, "The Commission for Environmental Cooperation and North American Migratory Bird Conservation: the Potential of the NAAEC Citizen Submission Procedure," *Journal of International Wildlife Law and Policy* 6, 3 (2003): 205-31.

involved in all provincial bird conservation partnerships, including those deriving from the major national and continental plans noted below. As our discussion of these will show, the cws has steadily expanded beyond the game birds focus that dominated its early bird work.³⁷

*A major role for volunteer-based NGOs,
and a heavy reliance on state-societal partnerships*

Bird conservation efforts across the province are strongly influenced by the work of non-state actors, with many of their contributions channelled through partnerships with the state agencies just mentioned. The NGO sector has proven itself resourceful and adaptable. Citizen volunteers continue to pour thousands of hours each year into habitat restoration, data gathering, guiding field trips, and other projects. The scope of the volunteer commitment is evident each spring at a growing number of weekend bird festivals held across the province.³⁸ While the hunter side of the community has traditionally been most willing to dedicate time and other resources, the non-hunter segment has become increasingly active, including through its support of Ducks Unlimited's multifaceted habitat conservation work. The deep historical roots of Ducks Unlimited and its core allies³⁹ are manifested in useful reserves of "institutional memory," in well established connections to state actors, and in its impressive capacity to extract volunteer energy and dollars from supporters.

Most of the initiatives discussed below illustrate the heavily "partnered" nature of policy and project work in the bird conservation field. The partnerships responsible for most planning and project efforts almost always include representatives from both sides of the state/society divide, linking government agencies to conservation NGOs and, in some cases, companies, industry organizations, or First Nations governments or agencies. Initiatives such as the Pacific Estuary Conservation Program, the South Okanagan Similkameen Conservation Program, and the Canadian Intermountain Joint Venture all bring together long lists of partners. The cws and Ducks Unlimited are omnipresent, while organizations such as the Nature Trust and the Land Conservancy are also often involved. Organizations that are themselves coalitions frequently pop up

³⁷ Burnett, *A Passion for Wildlife*, chaps. 3, 6.

³⁸ Major BC bird festivals include the Brant Wildlife Festival (Qualicum Beach), the Wings over the Rockies Festival (Columbia Valley), and the Meadowlark Festival (Penticton).

³⁹ For example, Ducks Unlimited undertook its first BC projects in the early 1950s and established its first BC office in the late 1960s, while the Nature Trust was established in 1971. For brief histories, see Campbell et al., *The Birds of British Columbia*, vol. 1, 32-3, 51-2; Vernon C. (Bert) Brink, "Natural History Societies of BC," in Murray, *Our Wildlife Heritage*, 151-8; and Lee Straight, "Wildlife Societies in BC," in Murray, *Our Wildlife Heritage*, 139-50.

on the lists of partners involved in various initiatives. For example, the Grasslands Conservation Council, which is represented on the partner lists of initiatives such as the Canadian Intermountain Joint Venture and the South Okanagan Similkameen Conservation Program, is itself an alliance of organizations and individuals, including government agencies, First Nations, environmental NGOs, and industry groups.⁴⁰

Strong external links and influences

BC bird conservation activity is significantly shaped by the community's strong connections to national, continental, and hemispheric networks. Border-hopping birds spawn transnational networks of bird conservationists, providing fascinating test cases for policy researchers wanting to explore the impacts of external forces on domestic organizations and policy processes.⁴¹ Ducks Unlimited would itself provide an interesting case. The Pacific region office is thoroughly integrated into larger national and international organizations, but it has been at the forefront of developments that have seen Ducks Unlimited Canada establish distinctive priorities in response to growing support from non-hunters.

The extent to which the broader conservation community influences BC developments is evident in the number and scope of networks linking BC actors to counterparts in other parts of Canada, in the degree to which BC conservation planning is integrated into broader plans and initiatives, and in the rich, reciprocal flows of ideas and information between BC conservationists and their counterparts elsewhere. In his work with shorebirds, for example, Rob Butler of the Pacific Wildlife Research Centre and Simon Fraser University's Department of Biological Sciences regularly connects with others involved in the Canadian and US shorebird planning processes.⁴² Researchers and conservationists from Siberia, British Columbia, and Washington State have long coalesced around shared concerns about the Wrangel Island lesser snow goose population.⁴³

Bird conservation work has been affected by the steady development of national, continental, hemispheric, and global conservation plans. This

⁴⁰ See *BC Grasslands*, August 2002, 2.

⁴¹ See Jeremy Wilson, "The Domestic Policy Impacts of Transnational Migratory Bird Conservation Arrangements: Reflections on the Impacts of North American Initiatives," International Studies Association, Portland, Oregon, February 2003.

⁴² See a biography and list of publications at <<http://www.sfu.ca/biology/wildberg/butler/>> (viewed 13 January 2003). On Butler's Western Sandpiper research, see Nancy Baron, "Riders on the Storm," *Canadian Geographic* 119, 5 (1999): 48-57.

⁴³ See Canada, Environment Canada, Canadian Wildlife Service, "About Us: Major Initiatives: Arctic Goose Joint Venture," at <www.pyr.ec.gc.ca/EN/Wildlife/initiatives/index.shtml> (viewed 30 March 2003).

expansion began with the adoption of the North American Waterfowl Management Plan (NAWMP) in 1986.⁴⁴ Canada and the United States had actively cooperated on waterfowl conservation for several decades before, but NAWMP shifted coordinated planning onto a new level, committing the two nations (and after it signed on in 1994, Mexico) to the goal of restoring waterfowl populations from an estimated sixty million to the 100 million level estimated to have existed in the 1970s. Conceived as “an International Agreement in Principle for joint resource management purposes” rather than as a formal treaty, NAWMP set out a series of guiding principles, with particular emphasis on long-term, landscape-level planning, a strong biological foundation, a “continentally-oriented, but locally-controlled” approach, and the “local entrepreneurship” unleashed through alliances of partners.⁴⁵ Regionally oriented arrangements known as “joint ventures” are the main implementation vehicle.

Between 1986 and 2003, NAWMP’s Canadian projects are credited with conserving 1.8 million hectares of habitat.⁴⁶ This record reflects the plan’s importance as a vehicle for the importation of sizable financial transfers from the United States. Between 1986 and 2003, 56 percent of the \$825 million (Cdn.) invested in Canadian NAWMP projects came from the United States, with nearly half of this amount from the fund established by Congress when it passed the North American Wetlands Conservation Act (NAWCA) in 1989.⁴⁷ Under this legislation, US federal government dollars are used to leverage further contributions from state governments, US NGOs such as Ducks Unlimited Inc., and Canadian sources.⁴⁸

British Columbia’s formal ties to NAWMP date to 1991 and the establishment of the Pacific Coast Joint Venture (PCJV). The PCJV is the only one of the fourteen NAWMP “habitat” joint ventures based on a cross-border management model, bringing together state and NGO actors from northern California, Oregon, Washington, British Columbia, and Alaska (and, since 2002, Hawaii). British Columbia has several

⁴⁴ See “A History of the North American Waterfowl Management Plan,” at <www.wetlands.ca/nawcc/nawmp/past.htm> (viewed 1 February 1999).

⁴⁵ North American Waterfowl Management Plan, “Strengthening the Biological Foundations, 2003: North American Waterfowl Management Plan Update” (June 2003 draft, final version scheduled for release in 2004), 10.

⁴⁶ Canada, Environment Canada, *Canadian Habitat Matters 2003* (Ottawa: Environment Canada, 2003), 1.

⁴⁷ *Ibid.*, 1, 3.

⁴⁸ Canadian partners contributed about \$365 million up to 2003, with about one-quarter of this from NGOs, foundations, and other non-government sources, and the remainder from the federal and provincial governments in approximately equal amounts.

representatives on the international management board.⁴⁹ A separate provincial steering committee oversees BC projects. Under NAWMP's complex funding arrangements (and a set of guiding priorities which, from NAWMP's outset, attached the greatest importance to conserving habitat in Canada's "duck factory" prairie region), British Columbia's PCJV projects receive 6 percent of the funds directed to Canada from the NAWCA fund. Canadian PCJV funding proposals to NAWCA are channelled to the federally appointed governing body, the North American Wetlands Conservation Council (Canada).⁵⁰ NAWCA rules require that projects be supported financially by other partners.

National and transnational planning efforts have sharply expanded since NAWMP's inception. Shorebird conservation efforts have been guided by the Western Hemisphere Shorebird Reserve Network as well as by American and Canadian shorebird conservation plans.⁵¹ Both countries produced national landbird plans in the 1990s⁵² and contributed to a joint Canada-US plan released in 2004.⁵³ A cross-border plan for waterbird species (e.g., rails, grebes, cranes, herons, gulls, and terns) was released in 2002.⁵⁴ Although none of these other "species group" plans

⁴⁹ Some British Columbians have also been involved in a couple of NAWMP "species" joint ventures: the Sea Duck Joint Venture and the Arctic Goose Joint Venture.

⁵⁰ For details on the process by which Canadian NAWMP proposals for NAWCA funds are prepared and vetted, see North American Wetlands Conservation Council (Canada), "Canada and the North American Wetlands Conservation Act," at <www.wetlandscanada.org/nawca.html> (viewed 19 January 2003); and Secretariat, NAWCA Canada Council, *NAWCA and the North American Waterfowl Management Plan: A Guide for Canadians* (Ottawa: Secretariat, NAWCA Canada Council, 2001).

⁵¹ Western Hemisphere Shorebird Reserve Network, *Shorebirds across the Americas* (Manomet, MA: Manomet Center for Conservation Sciences, 2001); Stephen Brown, Catherine Hickey, Brian Harrington, and Robert Gill, eds., *United States Shorebird Conservation Plan* (Manomet, MA: Manomet Center for Conservation Sciences, May 2001); and Donaldson et al, eds., *Canadian Shorebird Conservation Plan*.

⁵² Partners in Flight Canada, Canadian Landbird Conservation Program, "Framework for Landbird Conservation in Canada," at <www.cws.scf.ec.gc.ca/birds/frm_cdr_e.cfm> (viewed 3 July 2003); and Partners in Flight, *Conservation of the Land Birds of the United States* (The Plains, VA: American Bird Conservancy, 2000).

⁵³ T.D. Rich, C.J. Beardmore, H. Berlanga, P.J. Blancher, M.S.W. Bradstreet, G.S. Butcher, D.W. Demarest, E.H. Dunn, W.C. Hunter, E.E. Inigo-Elias, J.A. Kennedy, A.M. Martell, A.O. Panjabi, D.N. Pashley, K.V. Rosenberg, C.M. Rustay, J.S. Wendt, and T.C. Will, *Partners in Flight: North American Landbird Conservation Plan* (Ithaca, NY: Cornell Laboratory of Ornithology, 2004).

⁵⁴ James A. Kushlan, Melanie J. Steinkamp, Katharine C. Parsons, Jack Capp, Martin Acosta Cruz, Malcolm Coulter, Ian Davidson, Loney Dickson, Naomi Edelson, Richard Elliot, R. Michael Erwin, Scott Hatch, Stephen Kress, Robert Milko, Steve Miller, Kyra Mills, Richard Paul, Roberto Phillips, Jorge E. Saliva, Bill Sydeman, John Trapp, Jennifer Wheeler, and Kent Wohl. *Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan. Version 1* (Washington: Waterbird Conservation for the Americas, 2002). See also, Robert Milko, Loney Dickson, Richard Elliot, Garry Donaldson, *Wings over Water: Canada's Waterbird Conservation Plan* (Ottawa: Ministry of Environment, 2003).

have access to even a tiny fraction of the financial support dispersed for wetland-related initiatives under NAWCA, they have played a growing role in inspiring and guiding local and regional bird conservation work in British Columbia and elsewhere.

More important, the species group initiatives have contributed to a growing push to integrate habitat conservation work around an "all birds" focus. These efforts are manifested in the quick rise to prominence of the North American Bird Conservation Initiative (NABCI), which was launched by the Commission for Environmental Cooperation (CEC) in 1999.⁵⁵ NABCI's goal is "regionally-based, biologically-driven, landscape-oriented partnerships that deliver the full spectrum of bird conservation" across the continent.⁵⁶ It aims to build on the success of the joint ventures and other regional bird initiatives, and foster cooperation among those involved in the various species-group plans.

For the provincial community, all of this planning activity has contributed to broader and denser patterns of interaction with actors beyond British Columbia. For example, British Columbia's representatives on the PCJV management board meet twice yearly with their counterparts from the United States. Various BC organizations have embraced the Important Bird Areas (IBA) program, thus intensifying connections with its two national sponsors (the Canadian Nature Federation and Bird Studies Canada) as well as with Birdlife International (the organization credited with initiating the IBA program in 1985).⁵⁷ As part of its efforts to develop a common framework for planning and implementing conservation measures, NABCI has mapped terrestrial Bird Conservation Regions (BCRS). Portions of British Columbia are in five different BCRS – Northern Pacific Rainforest, Northern Rockies, Great Basin, Northwestern Interior Forest, and Boreal Taiga Plains.⁵⁸ Each sprawls into adjoining jurisdictions. The resulting potential for cross-border cooperation was illustrated by Krista de Groot of the cws in a recent presentation entitled "Integrating Conservation across Borders and Bird Groups."⁵⁹ Focusing

⁵⁵ The CEC was established by the North American Agreement on Environmental Cooperation, the so-called NAFTA side-agreement. See Pierre Marc Johnson and Andre Beaulieu, *The Environment and NAFTA: Understanding and Implementing the New Continental Law* (Washington, DC: Island Press, 1996).

⁵⁶ North American Bird Conservation Initiative, "Strategy and Action Plan," 1, at <www.bsc-eoc.org/nabcstrategy.html> (viewed 26 February 2002).

⁵⁷ See "Important Bird Areas of Canada: Frequently Asked Questions," at: <<http://www.ibacanada.com/faq.html>> (viewed 23 June 2003).

⁵⁸ See "Canadian Bird Conservation Regions," at <www.bsc-eoc.org/international/bcrscanada.html> (viewed 3 July 2003).

⁵⁹ Krista De Groot, "Integrating Conservation across Borders and Bird Groups" (unpublished presentation notes). See also Canadian Intermountain Joint Venture, "Biological Foundation and Prospectus" (unpublished draft, March 2003), 6.

on collaboration in the Interior West, she highlighted links between the new Canadian Intermountain Joint Venture and the well-established (American) Intermountain West Joint Venture, potential cross-border initiatives by US-based BCR coordinators, and joint ecosystem initiatives such as the Shrubsteppe Working Group and the Yellowstone to Yukon Initiative.

A knowledge-based community

The plans just discussed also promote cross-border learning, providing vehicles for the importation of new ideas and assumptions. Here, as in many other policy fields, ideas circulate within what Peter Haas has labelled an "epistemic community," a transnational network of experts linked by shared beliefs, notions of validity, and policy goals.⁶⁰ The broader epistemic community of bird scientists influences BC bird conservationists, including not only the biologists employed by state agencies or large organizations such as Ducks Unlimited but also the dedicated volunteers whose "amateur" research helps to enhance the knowledge base.⁶¹

The epistemic community's guiding norms ensure that those shaping BC bird conservation priorities ground their decisions on knowledge acquired and tested through methods accepted as legitimate within the avian biology profession. Although differences between research- and action-oriented members of the community are sometimes apparent,⁶² there is general agreement on the importance of basing policy on sound science and on the need to address gaps in the knowledge base. The influence of the broad epistemic community is readily apparent in the joint venture and species group planning documents that, to an increasing extent, shape bird conservation activity in the province. For example, the prospectus of the newly established Canadian Intermountain Joint Venture (CIJV) illustrates how current BC thinking has been influenced by the "priority" species-"focal" species approach articulated in the various plans.⁶³ CIJV planners will list priority species for each habitat type in the Intermountain Region, evaluate conser-

⁶⁰ Peter M. Haas, "Introduction: Epistemic Communities and International Policy Coordination," *International Organization* 46, 1 (1992): 2-3.

⁶¹ Wilson, "Domestic Policy Impacts."

⁶² Trevor Swerdfager distinguishes between operational and research wings of the overall Canadian migratory birds community. See Swerdfager, "The Search for Equilibrium," 6-8.

⁶³ Canadian Intermountain Joint Venture, "Biological Foundation," 25-9. For an account of the origins of this approach, see Michael F. Carter, William C. Hunter, David N. Pashley, and Kenneth V. Rosenberg, "Setting Conservation Priorities for Landbirds in the United States: The Partners in Flight Approach," *The Auk* 117, 2 (2000): 541-8.

vation threats facing each priority species, develop (where possible) species population objectives, and then specify "suites of focal species" for each habitat type.⁶⁴ These steps will lead to specification of habitat objectives and recommendations on "best management practices" for land managers.

*Preference for soft policy instruments
and non-adversarial approaches*

As noted already, diverse threats to birds have generated diverse responses from bird conservationists. This basic reality, as well as the BC bird community's diverse membership, has resulted in a wide range of views as to the best means of achieving bird conservation goals. Nonetheless, a mainstream set of views is evident. Soft, persuasive, or incentive-based policy instruments are generally favoured, while regulatory instruments are treated with some suspicion.

Such predilections, it should be noted, are commonplace in the policy communities working on various dimensions of Canadian environmental policy.⁶⁵ Although some researchers have suggested that Canadian and American environmental policy styles tend to differ (with US agencies traditionally more inclined to deploy regulatory instruments),⁶⁶ it can be argued that the long history of integrated continental work on birds has led to cross-border convergence. Taking into account the historical significance of waterfowl and the strong influence of NAWMP, we might hypothesize that a continental bird conservation "policy style" has evolved; that this evolution has been strongly influenced by the threats confronting prairie-bred waterfowl as well as by the way Ducks

⁶⁴ Canadian Intermountain Joint Venture, "Biological Foundation," 26.

⁶⁵ For example, Michael Howlett's analysis of "implementation styles" leads him to argue that, in their choice of policy instruments, Canadian environmental policy makers have recently favoured a non-coercive approach centring on negotiations between government regulators and regulated entities. Likewise, in his research on the regulation of agricultural pollution, Eric Montpetit identifies a voluntary approach he calls "science-based moral suasion" as the main policy instrument used by federal authorities. See Michael Howlett, "Policy Instruments and Implementation Styles: The Evolution of Instrument Choice in Canadian Environmental Policy," in VanNijnatten and Boardman, *Canadian Environmental Policy*, 25-45; and Eric Montpetit, "Sound Science and Moral Suasion, Not Regulation: Facing Difficult Decisions on Agricultural Non-Point-Source Pollution," in VanNijnatten and Boardman, *Canadian Environmental Policy*, 274-85.

⁶⁶ George Hoberg, "Canadian-American Environmental Regulations: A Strategic Framework," in VanNijnatten and Boardman, *Canadian Environmental Policy*, 171-89; and George Hoberg, "Governing the Environment: Environmental Policy in Canada and the United States," in *Degrees of Freedom: Canada and the United States in a Changing Global Context*, ed. Keith Banting, George Hoberg, and Richard Simeon (Kingston and Montreal: McGill-Queen's University Press, 1997), 341-88.

Unlimited, the usfws, and the cws have responded; and that these organizations' responses reflect their heavy emphasis on trying to shape the management of privately owned habitat. Much of this work, that is, has aimed at inducing landowners – particularly farmers and ranchers – to adopt waterfowl-friendly practices. Ducks Unlimited and government agencies are clearly convinced that these goals are best achieved through the use of carrots rather than sticks. As a recent planning document prepared for Ducks Unlimited's national organizations puts it: "While the regulation of many activities is essential to the protection of the environment, DU will focus its efforts on legislative incentives rather than disincentives, particularly in the area of land use."⁶⁷ In fact, as references to their work below will indicate, Ducks Unlimited's Pacific Region organization (along with close partners such as the Land Conservancy of British Columbia) has traditionally put relatively little emphasis on government policy, choosing instead to concentrate on more direct means of protecting or enhancing habitat.

Although periodic participants such as the Western Canada Wilderness Committee are obviously exceptions, most of the NGOs involved in BC bird conservation express an aversion to confrontational or even adversarial approaches, preferring to work cooperatively with governments, landowners, and resource industries. The Canadian Intermountain Joint Venture prospectus, for example, notes the importance of minimizing the negative impacts of its bird conservation activities on land and resource users, and underscores respects in which the interests of these users coincide with those of bird conservationists.⁶⁸ "Ranchers and other CIJV partners," for instance, "can expect to achieve gains in both livestock and bird productivity by working together to address shared concerns over increased urbanization, cultivation, weed invasion, forest encroachment and abusive recreational practices."⁶⁹

ASSESSING POLICIES AND MEASURES

British Columbia's bird conservationists have helped secure many important areas of bird habitat and continue to work on a wide variety of useful stewardship and enhancement measures. During the past decade, they have also helped pressure governments to expand protected areas networks and to develop policies aimed at protecting endangered species. Questions remain, however, as to whether this impressive list of ac-

⁶⁷ Ducks Unlimited, *Ducks Unlimited's Conservation Plan*, 5.

⁶⁸ Canadian Intermountain Joint Venture, "Biological Foundation," 8-9, 17-19.

⁶⁹ *Ibid.*, 19.

accomplishments is sufficient to reverse or limit the forces threatening various BC bird species. Assessment of this question leads, in turn, to questions about what factors might promote or impede efforts to improve conservation measures and, particularly, to questions about whether state agencies have the capacity and will to take the measures necessary to improve conservation.

Conservation of bird habitat: Wildlife reserves, protected areas, and enhancement/stewardship

Under Section 4 of the BC Wildlife Act, the provincial government can set aside areas of habitat in which conservation of wildlife is the priority land use. As of August 2001 the government had designated twenty-two Wildlife Management Areas (WMAs), totalling 230,000 hectares.⁷⁰ Eighteen of these were designated wholly or partially for the protection of birds. Most of these, including reserves such as the Columbia Wetlands WMA (26,000 hectares) and the Boundary Bay WMA (11,500 hectares), were set aside for waterfowl. Some vital seabird nesting colonies and other important bird habitat are protected as provincial ecological reserves. The federal government is authorized to create Migratory Bird Sanctuaries (MBSS) under the Migratory Birds Convention Act, 1916, and National Wildlife Areas (NWA) under the Canada Wildlife Act.⁷¹ British Columbia's five NWA and seven MBSS cover about 5,400 hectares.⁷²

Other areas have been preserved through the securement work of NGOs such as Ducks Unlimited, the Wild Bird Trust of British Columbia, the Nature Trust, and the Land Conservancy. It is difficult to gauge the total amount of habitat set aside in this way,⁷³ but according to the BC Lands in Trust Registry, the total exceeds 180,000 hectares, most of which was purchased through fee simple transactions.⁷⁴ This total

⁷⁰ British Columbia, Ministry of Water, Land and Air Protection, "Wildlife Management Areas in British Columbia (as of August, 2001)" (Victoria: Ministry of Water, Land and Air Protection, 2003).

⁷¹ See Pauline Lynch-Stewart, Ingrid Kessel-Taylor, and Clayton Rubec, *Wetlands and Government: Policy and Legislation for Wetland Conservation in Canada* (Ottawa: North American Wetlands Conservation Council [Canada], 1999), 28-9.

⁷² Canada, Environment Canada, Canadian Wildlife Service, Pacific and Yukon Region, "About Us," at <www.pyr.ec.gc.ca/EN/Wildlifeabout/index.shtml> (viewed 30 March 2002). On creation of the system, see Burnett, *A Passion for Wildlife*, 90, 154-61.

⁷³ This is difficult because habitat conservation accomplishments are sometimes claimed by each of the organizations involved in multipartner securement initiatives (thus leading to concerns about double-counting) and because these organizations' reports of accomplishments sometimes roll together areas secured, enhanced, and restored.

⁷⁴ BC Lands in Trust, "Summaries and Statistics," at <<http://www.landtrustalliance.bc.ca/registry/code/index/php?template=stats>> (viewed 10 August 2003). A small additional amount is covered by conservation covenants obtained by various groups.

includes some important bird habitat. For example, the various partners involved in the Pacific Estuary Conservation Plan have acquired over 3,700 hectares of key coastal habitat.⁷⁵ In the Interior, Ducks Unlimited, Environment Canada (under the Fraser River Management Plan), and other partners invested over \$4 million between 1992 and 1998 to secure over 10,000 hectares of high-quality habitat under the Interior Wetlands Program.⁷⁶ The Wild Bird Trust established Maplewood Flats sanctuary in North Vancouver and four other refuges.⁷⁷ The Nature Trust and partners have established “biodiversity ranches” at Vaseux Lake and White Lake near Oliver, thus securing habitat critical to species such as the Long-Billed Curlew and Sage Thrasher.⁷⁸ A partnership has also been responsible for the Creston Valley Wildlife Management Area, a 6,500-hectare reserve established by the provincial government in 1968 as part of the program to mitigate loss of habitat resulting from Columbia River hydro development. It has been supported by federal, provincial, and local governments as well as Ducks Unlimited, but the two senior levels of government have sharply reduced their support.⁷⁹

While reserves do help conserve important habitat, the significance of the total system of reserves should not be exaggerated. Only a very small proportion of the provincial land base has been set aside for explicit bird protection. The combined area in federal and provincial reserves and NGO-secured areas encompass less than 500,000 hectares, about one-half of 1 percent of the province. As well, doubts continue to be raised about the effectiveness of protection measures currently being applied in the extant provincial and federal reserves. For example, a recent evaluation of the National Wildlife Area-Migratory Bird Sanctuary (NWA-MBS) system by the Canadian Nature Federation (CNF) reaches some pessimistic conclusions.⁸⁰ The CNF, it says, is currently trying to manage the 143 sites in this system on an annual budget of \$1.7 million, or about fifteen cents per hectare. This allocation, which compares unfavourably with

⁷⁵ Environment Canada and U.S. Fish and Wildlife Service, Pacific Coast Joint Venture, “Pacific Coast Joint Venture: A Dozen Years of Accomplishments, 1991-2002,” (Vancouver and Washington, DC: Environment Canada and U.S. Fish and Wildlife Service), 2003, 14.

⁷⁶ Ducks Unlimited, “Ducks Unlimited’s Conservation Plan,” 50. This work is being carried on under a successor program, the Intermountain Wetland Conservation Program.

⁷⁷ Andrew Scott, “Wing Nuts,” *Westworld*, Spring 2004, 36-7.

⁷⁸ Nature Trust of British Columbia, “About the Nature Trust,” at <<http://www.naturetrust.bc.ca/projects/>> (viewed 10 August 2003).

⁷⁹ Burnett, *A Passion for Wildlife*, 186-93.

⁸⁰ Canadian Nature Federation (CNF), *Conserving Wildlife on a Shoestring Budget* (Ottawa: Canadian Nature Federation, 2002). The CNF, which is one of the sponsors of the Canadian Important Bird Areas (IBA) Program, notes that nearly two-thirds of the sites in Canada’s NWA-MBS system overlap with IBAs.

the US government's annual spending of about twelve dollars per hectare on its national wildlife refuges, has resulted in inadequate protection for some of Canada's most important wildlife habitat: "Most sites are not actively being managed, enforcement activity is sporadic ... and the ecological integrity of many sites is at risk."⁸¹ Many sites are threatened by agricultural or urban encroachment or by resource exploration and development in adjacent areas. Exotic species are a problem at over half of the reserves, and wildlife in many are subject to poaching or active disturbance from boaters or others. "These threats are for the most part being left unattended due to lack of funds. Many NWA's and MBSS stand in need of management plans, regulatory enforcement, and habitat enhancement. Staff members are left to make decisions without adequate scientific data. Non-government research links are being lost, volunteers are declining, and conservation partnerships are in jeopardy."⁸²

Furthermore, opportunities to expand the network are being lost, although scores of critical wildlife sites remain unprotected. No money has been allocated for land acquisition since 1984.⁸³ Environment Canada has been authorized to designate marine wildlife areas under the Canada Wildlife Act since 1994, but the identification of sites has been slow, and none has been designated.⁸⁴

Although some important areas were added to British Columbia's WMA network in the 1990s, it seems unlikely that the provincial government will fill the vacuum left by the weak federal performance documented in the CNF report. For example, despite clear evidence that the Roberts Bank foreshore provides a critical migratory stopover for a globally significant but declining population of migrating Western Sandpiper, the province has been no more willing than has the federal government to give the area protected status.⁸⁵ The province has done no better than has the federal government in managing wildlife areas, and recent provincial cutbacks have further diminished provincial capacity.

It is, of course, important to remember that the area in bird-related reserves represents only a tiny fraction of the total included in the province's protected areas system and that a major expansion of this system occurred during the NDP's terms in office, pushing the total area protected from about 5.75 million hectares in 1991 (6.1 percent of

⁸¹ *Ibid.*, i.

⁸² *Ibid.*

⁸³ *Ibid.*, ii and ii.

⁸⁴ *Ibid.*, 3, 8.

⁸⁵ Larry Pynn, "Sites Sensitive: Industry and Growth Threaten Crucial Wetlands," *Vancouver Sun*, 31 May 2000.

the land base) to nearly 12 million hectares by 2002 (12.5 percent of the land base).⁸⁶ Of particular note are efforts to increase the provincial protected areas system's "eco-representativeness."⁸⁷ Most of the province's 100 "ecosections" are significantly better represented than they were a decade ago. The protected areas system, however, still has a clear "rocks and ice" bias, with lowland ecosections still prominent among the two-fifths of the province's 100 ecosections with less than 5 percent of their area protected. Important zones, such as the North Okanagan Basin, the East Kootenay Trench, and the Fraser Lowlands, fall below this line.⁸⁸ For instance, while 16 percent of the total area included in the new Canadian Intermountain Joint Venture is protected, only 4 percent of its lowland areas are protected.⁸⁹

The province still has not heeded calls for adoption of a wetlands policy, despite continued degradation of wetlands and continued growth in appreciation of their ecological significance. As Linda Nowlan argued in 1996: "BC needs a specific written policy to raise the profile of wetlands protection ... The policy should be based on a classification system that identifies all provincial wetlands and ranks them according to their ecological significance ... [T]he policy should provide a statutory goal of 'no net loss' of wetlands functions."⁹⁰

The need to expand efforts to conserve ecodiversity was highlighted in a 2003 paper on biodiversity protection by Geoff Scudder of UBC's Department of Zoology and Centre for Biodiversity Research.⁹¹ Focusing on species (birds and others) listed as at risk by the federal and provincial procedures, Scudder identified "rarity and richness hotspots" – areas with "high numbers of species at risk and high biological diversity."⁹² He found a "general lack of coincidence" between the top 5 percent of hotspots and protected areas: "a significant number of BC's rare and endangered species are located outside BC's protected areas ... [I]t is

⁸⁶ BC, Ministry of Water, Land and Air Protection, State of Environment Reporting, "Status and trends of protected areas" (2002), at <<http://wlapwww.gov.bc.ca/soerpt/1/protectedareas/percent.html>> (viewed 9 August 2003).

⁸⁷ BC, Ministry of Water, Land and Air Protection, State of Environment Reporting, "Is British Columbia's Rich Ecosystem Diversity Protected?" (2002), at <<http://wlapwww.gov.bc.ca/soerpt/1/protectedareas/gecosystems.html>> (viewed 9 August 2003).

⁸⁸ *Ibid.*

⁸⁹ Canadian Intermountain Joint Venture, "Biological Foundation," 9.

⁹⁰ Linda Nowlan, *Biodiversity Law and Policy in BC* (Vancouver: West Coast Environmental Law, 1996), sec. D-3.

⁹¹ G.G.E. Scudder, "Biodiversity Conservation and Protected Areas in British Columbia" (2003), at the Sierra Legal Defence Fund Web site: www.sierralegal.org/reports/Biodiversity_Report.pdf.

⁹² *Ibid.*, 1.

evident that the 12% of the land area currently designated as protected area in the province does not provide adequate protection for the very rich and rare biodiversity in British Columbia.”⁹³ For example, even if “complementarity principles” were used to conserve the most species in the smallest area, nearly 40 percent of the South Okanagan would need some form of protection in order to maintain its rare biodiversity.⁹⁴ An even larger area would be required to address concerns about buffer zones and connectivity corridors.

Campaigns for protected areas represent only one component of the bird conservation community’s habitat conservation work. Recognizing that reserves and protected areas will never provide more than a small fraction of the birds’ needs, BC bird conservationists have sought to restore or enhance habitat on private land and non-protected Crown land. For example, Pacific Coast Joint Venture partners have undertaken various water control engineering initiatives and have promoted stewardship of private land through initiatives such as the Greenfields and Comox Valley Waterfowl Management projects on Vancouver Island.⁹⁵ The Delta Farmland and Wildlife Trust, a partnership between farmers and conservationists formed in 1993, has encouraged grassland set-asides, the sowing of cover crops, and the planting of hedgerows.⁹⁶ Ducks Unlimited has led numerous restoration and enhancement projects, including those at Duck Meadow near Monte Creek and Frost Creek Marshes near Williams Lake. During the period when its primary focus was on water control engineering (up to the end of the 1980s), Ducks Unlimited invested about \$30 million in 550 water control projects in the Interior, improving over 50,000 hectares of habitat.⁹⁷

Bird conservationists in all parts of the province can point with pride to important areas of habitat that have been restored or enhanced by local volunteers. Most can also cite examples of local farmers, ranchers, or other land managers who, as a result of creative work by conservationists, have been persuaded to adopt bird-friendly practices. One would be hard pressed, however, to argue that all of these initiatives amount to more

⁹³ Ibid.

⁹⁴ Ibid., 5-6, citing L.D. Warman, “Identifying Priority Conservation Areas Using Systematic Reserve Selection and GIS at a Fine Spatial Scale: A Test Case Using Threatened Vertebrate Species in the Okanagan, British Columbia” (MSc. thesis, University of British Columbia, 2001).

⁹⁵ Environment Canada and U.S. Fish and Wildlife Service, Pacific Coast Joint Venture, “A Dozen Years,” 15.

⁹⁶ R.A. Bertrand, “Wildlife on Intensively Managed Farmland in British Columbia,” 152, in P. Neave, E. Neave, T. Weins, and T. Riche, “Availability of Wildlife Habitat on Farmland,” at <www.agr.gc.ca/policy/environment/pdfs/aei/chap15F.pdf> (viewed 23 January 2004).

⁹⁷ Ducks Unlimited’s Conservation Plan (2001), 50.

than a small mitigating counterforce against the tides of development that have degraded so much habitat across the province. Effective bird conservation strategies require much more than the spotty collections of measures that have been adopted so far.⁹⁸

Protecting Endangered Species

The bird conservation community has joined other environmentalists in pushing for measures to protect endangered species. As noted, both levels of government have developed processes for listing endangered species⁹⁹ as well as measures to enhance the prospects of listed species. Although its impact is yet to be determined, the federal endangered species legislation proclaimed in 2003 will help in conserving threatened bird species. The Species at Risk Act (SARA) is one of the three components of Canada's Strategy for the Protection of Species at Risk. The others are the Habitat Stewardship Program¹⁰⁰ and the 1996 Accord for the Protection of Species at Risk, a federal-provincial-territorial agreement pledging coordinated action.

SARA provides a legislative foundation for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), gives Cabinet authority over the listing of species at risk, and outlines the process that will lead from COSEWIC assessments to amendment of this list.¹⁰¹ For species listed as extirpated, endangered, or threatened, SARA sets out general prohibitions against killing, harming, harassing, capturing, and damaging or destroying "residences." For each of these species, it is necessary to prepare a recovery strategy and then an action plan. Recovery strategies will identify threats to the survival of the species and critical habitat, set goals and approaches for the species' recovery, and identify information gaps. Action plans will include suggested measures for protecting critical habitat. For species listed as "of special concern" (i.e., those COSEWIC previously classified as vulnerable), SARA requires preparation of a management plan. The act mandates measures

⁹⁸ For example, see Barry P. Booth, *Osoyoos Oxbows Important Bird Area Conservation Plan* (Port Rowan, ON: Bird Studies Canada, April 2001).

⁹⁹ See notes 19 and 20.

¹⁰⁰ Since its inception in 1999, the Habitat Stewardship Program has spent about \$10 million per year on habitat restoration, species recovery, land acquisition, and educational initiatives across the country. See Canada, Environment Canada, "Species at Risk Act: The Habitat Stewardship Program 2003-2004," at <http://www.sararegistry.gc.ca/gen_info/HSP_Backgrounder_e.pdf> (viewed 22 June 2003).

¹⁰¹ The act, as well as a legislative summary and a guide to the act, can be accessed at <http://www.sararegistry.gc.ca/the_act/default_e.cfm>. See Kristen Douglas (Parliamentary Research Branch), "Legislative Summary: Bill C-5, The Species at Risk Act" (Ottawa: Library of Parliament, October 2002).

for protecting critical habitat, prohibits destruction of such habitat, and gives the minister authority to provide compensation to those losing economically as a result of certain critical habitat protection measures.

British Columbia has not adopted stand-alone endangered species legislation (although a proposal was debated by the Harcourt NDP Cabinet in 1992);¹⁰² instead, the province has constructed a multipart system for managing threatened species. It consists of longstanding Wildlife Act provisions, the Identified Wildlife Management Strategy (IWMS), other elements of the Forest Practices Code regime adopted in the mid- and late-1990s, and a few species-specific plans and measures. The Wildlife Act regulates the killing, capture, and harassment of terrestrial vertebrates, and allows Cabinet to designate species as endangered or threatened. Once a species is designated, land within a Wildlife Management Area may be set aside as a “critical wildlife area” or “wildlife sanctuary.”¹⁰³ Only three species have been designated as endangered since these provisions came into force in 1980. These include two bird species: the Burrowing Owl and the American White Pelican.¹⁰⁴ The Wildlife Act does not require that species on the provincial Red and Blue Lists be reviewed for designation and, as the major disjuncture between the numbers of species listed and designated indicates, governments have felt little need to designate (or even review) Red- or Blue-Listed species.

Under the provincial Forest Practices Code (FPC), the *Biodiversity Guidebook* and the *Riparian Management Area Guidebook* were designed to protect habitat for most species in the forest and range areas managed by the Ministry of Forests. Species not sufficiently protected by these “coarse filter” approaches are supposed to be addressed through the Identified Wildlife Management Strategy. It provides for “stand level” measures and does not address more general problems, such as overall habitat supply or habitat connectivity.¹⁰⁵ From the outset the government underscored this limited vision of the IWMS, noting that it was meant to complement other wildlife protection measures mandated by the Wildlife Act.

The first rendition of the IWMS was released in 1999. The second, presented in June 2004, reflects the new Forest and Range Practices Act

¹⁰² Wilson, *Talk and Log*, 306.

¹⁰³ British Columbia, *Wildlife Act*, s. 5.

¹⁰⁴ The only other species to be designated are the Vancouver Island Marmot (endangered) and the Sea Otter (threatened).

¹⁰⁵ BC, Ministry of Water, Land and Air Protection, *Identified Wildlife Management Strategy: Procedures for Managing Identified Wildlife, Version 2004* (Victoria: Ministry of Water, Land and Air Protection, 2004), 1, at <<http://wlapwww.gov.bc.ca/wld/identified.html>> (viewed 12 June 2004).

as well as one component of the province's attempt to align its policies with the new federal SARA regime. Under the Forest and Range Practices Act, the minister of Water, Land and Air Protection is authorized to establish two categories of species requiring special management attention.¹⁰⁶ The first category will include species negatively affected by forest and range practices on Crown land that are listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) under SARA.¹⁰⁷ Additional species designated "regionally important" will be included in a second category. Fourteen COSEWIC-listed bird species (or subspecies) were on the 2004 Identified Wildlife list.¹⁰⁸

Identified Wildlife can be managed through establishment of wildlife habitat areas and through various types of prescriptions, including "General Wildlife Measures."¹⁰⁹ As noted below, the government has specified that the cumulative impacts resulting from all Identified Wildlife measures cannot exceed 1 percent of the annual allowable cut, thus raising questions about the potential efficacy of its efforts. As of October 2003, 172 wildlife habitat areas had been designated. About half focus on birds,¹¹⁰ with most of these small areas designated for species such as the Marbled Murrelet or Ancient Murrelet. There are several wildlife habitat areas for the "Queen Charlotte" Goshawk, including two of the largest at about 2,500 hectares each.

All of the (category one) species on the IWMS list are also subject to SARA provisions requiring the development of recovery strategies.¹¹¹ Work on some recovery strategies had begun before SARA's passage. For example, recovery plans for species such as the White-Headed Woodpecker, Yellow-Breasted Chat, and Sage Thrasher are being prepared as part of a larger landscape planning process under the South Okanagan Similkameen Conservation Program.¹¹² Two high-profile species, the

¹⁰⁶ Ibid.

¹⁰⁷ Ibid., 2.

¹⁰⁸ The fourteen are: Ancient Murrelet, Burrowing Owl, Flammulated Owl, Great Blue Heron, "Interior" Western Screech-Owl, Lewis's Woodpecker, Long-Billed Curlew, Marbled Murrelet, "Queen Charlotte" Goshawk, Sage Thrasher, Short-Eared Owl, Spotted Owl, White-Headed Woodpecker, and Yellow-Breasted Chat. See BC, Ministry of Water, Land and Air Protection, *Identified Wildlife Management Strategy: Accounts and Measures for Managing Identified Wildlife, Version 2004* (Victoria: Ministry of Water, Land and Air Protection, 2004), 8, at <<http://wlapwww.gov.bc.ca/wld/identified/accounts.html>> (viewed 12 June 2004).

¹⁰⁹ *Identified Wildlife Management Strategy: Procedures*, 3.

¹¹⁰ BC, Forest Practices Board, *Implementation of Biodiversity Measures*, 27. Another 195 proposed WHAs were awaiting a decision.

¹¹¹ Species at Risk Act Public Registry, "Recovery Strategies," at <http://www.sararegistry.gc.ca/plans/recovery2_e.cfm> (viewed 22 June 2003).

¹¹² South Okanagan - Similkameen Conservation Program, "Status of Recovery Planning."

Marbled Murrelet and the Spotted Owl, have been the object of extensive assessment and management planning initiatives.¹¹³

It is too early to assess the combined effects of the federal and provincial endangered species measures. A number of critics, however, point to causes for concern. Even before the provincial Liberal government's talk of moving towards a "results-based" Forest Practices Code, BC environmentalists had questioned the potential of the iwms and other elements of the code regime. Much of the skepticism centred on the severe limit on timber supply impacts that the NDP government instituted in order to assuage forest industry concerns. Focusing on the edict that Identified Wildlife Management Strategy should not reduce allowable cuts by more than 1 percent, the BC Endangered Species Coalition said: "This restriction seriously compromises the ability of the iwms to provide any meaningful protection for identified wildlife ... In reality, the iwms is not a wildlife management strategy, it is a timber supply management strategy, with wildlife considerations ... We are astounded at the government's attempt to present the iwms as even a partial answer to BC's commitments under the National Accord for the Protection of Species at Risk."¹¹⁴

George Hoberg has examined the curious and crude episode of policy making that produced the tight cap on how much the code would be allowed to affect the timber supply, noting that this "6 percent solution" ensured that the code's impact on biodiversity and fish habitat would be "carefully contained."¹¹⁵ No attempt was made to justify the cap in environmental terms, and no credible source has ever suggested that even a fully implemented iwms could be expected to have anything more than a marginal impact on those species listed. For example, the Forest Practice Board's January 2003 assessment of management of Marbled Murrelet (MAMU) habitat under the iwms reaches pessimistic conclusions:

¹¹³ For brief histories, see the accounts at BC, Ministry of Water, Land and Air Protection, *Identified Wildlife Management Strategy, Accounts and Measures*. At <http://wlapwww.gov.bc.ca/wld_identified/accounts.html> (viewed 12 June 2004).

¹¹⁴ BC Endangered Species Coalition, "Comments on Identified Wildlife Management Strategy (Volume 1): Species at Risk and the Forest Practices Code" (Vancouver, January 1998), 2-3. According to the Forest Practices Board, the 1 percent cap is not yet limiting the establishment of wildlife habitat areas, but some regions are close to this limit. See BC, Forest Practices Board, *Implementation of Biodiversity Measure*, 28.

¹¹⁵ George Hoberg, "The 6 Percent Solution: The Forest Practices Code," in *Search of Sustainability: British Columbia Forest Policy in the 1990s*, Benjamin Cashore, George Hoberg, Michael Howlett, Jeremy Rayner, and Jeremy Wilson (Vancouver: UBC Press, 2001), 91, 72-3. See also Wilson, *Talk and Log*, 306-13.

The MAMU population will probably decline by almost one-third over the next 30 years due to loss of nesting habitat. Even though MAMU are considered identified wildlife because they require habitat that is particularly sensitive to loss due to forest practices, the Board's experience has been that the Code's MAMU conservation planning regime has not worked very well to this point. Conservation of remaining MAMU habitat in parts of BC where the habitat is already severely depleted has been limited and slow. Under the Code, forest practices were approved while MAMU habitat conservation awaited inventory and passed through a complex, slow impact assessment process. As a result, future options for MAMU habitat conservation have been rapidly lost.¹¹⁶

The outlook for another high-profile forest species appears to be no brighter. Influenced by the major battles over Spotted Owl habitat in the US Pacific Northwest, the provincial government appointed the Spotted Owl Recovery Team in 1990. Implementation of protective measures followed release of the Spotted Owl Management Plan in 1997. Here, as elsewhere, the government compromised in order to mollify timber interests. It tried to address conservation concerns by including Spotted Owl habitat in some of the new protected areas set aside as part of the Lower Mainland protected areas process as well as by establishing a series of special resource management zones. Forest practices within the latter zones were to be aimed at "creating, enhancing or maintaining a sufficient quantity and quality of suitable spotted owl habitat."¹¹⁷ Critics quickly pointed out that the fate of the species had been effectively sealed by provisions limiting the impacts that these measures could have on the timber supply and by a government pronouncement that new Spotted Owl sites identified after 1995 would receive no special protection.

The biological risk assessment generated by the government's own advisory team was gloomy. Under the plan adopted, it said, "the probability of spotted owl population stabilization or improvement ... is about 60%."¹¹⁸ The implications of this judgment were not widely discussed, but the government seems to have been content to accept a fairly high

¹¹⁶ British Columbia, Forest Practices Board, *Marbled Murrelet Habitat Management: Considerations for the new Forest and Range Practices Act – Special Report* (Victoria: Forest Practices Board, 2003). The Marbled Murrelet has been listed as threatened by COSEWIC and Red-listed by the province. It was included in Volume 1 of identified wildlife, and, as noted, some of the WHAS so far designated are supposed to help protect Marbled Murrelet nests.

¹¹⁷ British Columbia, Spotted Owl Management Inter-Agency Team, *Spotted Owl Management Plan: Summary Report (1997)*, at <<http://srmwww.gov.bc.ca/rmd/news/spotowl/owlsumrp.htm>> (viewed 1 August 2003).

¹¹⁸ *Ibid.*, 5.

probability that the Spotted Owl will vanish from British Columbia: a 60 percent chance of stabilization or improvement means a 40 percent chance of worsened status, which, in the case of an already endangered species, can mean only extirpation or extinction.

The Marbled Murrelet and Northern Spotted Owl have generated more widespread and intense environmental support than any other endangered or threatened species of BC birds (and, arguably, more than any species other than a few charismatic and/or cute ones, such as the Grizzly Bear and the Vancouver Island Marmot). Despite being the focus of strong environmental campaigns, however, both species seem to face grimmer prospects than they did a decade ago. Species whose fates collide with the interests of British Columbia's forest industry are no doubt in a separate political risk category, but the developments sketched here nonetheless do raise questions about the BC government's enthusiasm for protecting vulnerable species and biodiversity.¹¹⁹

While environmentalists continue to hope that the federal Species at Risk Act will address some of the deficiencies of the provincial approach, it is important to remember that crucial provisions of this law are subject to clauses reflecting the federal government's limited jurisdiction over habitat. Since the federal government is responsible for migratory birds, avian species may receive somewhat more protection than others. However, environmentalists who worked closely on the campaign to achieve endangered species legislation are generally guarded in their assessments of SARA's potential.

In general, SARA applies to species on federal lands, aquatic species, and migratory birds protected by the Migratory Birds Convention Act (MBCA). It mandates processes that can lead to broader application of measures or prohibitions to provincial lands, but the scope for federal intervention is restricted by application clauses. For example, the sections dealing with the destruction of critical habitat make prohibitions mandatory where the land in question is in federally protected areas (national

¹¹⁹ The Forest Practices Board's first overall evaluation of the province's implementation of FPC biodiversity measures reached mixed conclusions. The level of implementation varies across the province. All forest districts have established the administrative framework and implemented stand level components (riparian zones and wildlife tree patches), but less than half have implemented landscape level components (such as establishing old-growth management areas and managing for connectivity). Looking ahead to the changes ushered in by the new Forest and Range Practices Act, the board says that "a number of components of the biodiversity strategy receive no mention in the new Act and regulations. The strategy has only been partially implemented and it is not clear if government intends for implementation of the strategy to continue." See BC, Forest Practices Board, *Implementation of Biodiversity Measures*, i-iii.

parks, marine protected areas, migratory bird sanctuaries, or national wildlife areas) but specify that, where critical habitat lies outside such areas, a ministerial order would be required to bring the prohibitions into effect. Another subsection adds a further limitation: for migratory birds not on federal land, these prohibitions apply only to critical areas that are habitat under the meaning assigned by the MBCA and that are specified by Cabinet order.¹²⁰ The relevance of this wording is summarized by Kate Smallwood of the Sierra Legal Defence Fund. Beginning with a reference to La Forest and Gibson's views on the scope of the MBCA (noted earlier), Smallwood says:

Despite having extensive constitutional authority to protect migratory birds under the *Migratory Birds Convention Act* (MBCA) and their habitat, the federal government has failed to fully exercise this authority under SARA. Under section 58, mandatory protection for MBCA birds is limited to federal lands and migratory bird sanctuaries under the *Migratory Birds Convention Act*. There is discretionary power for the federal Cabinet to protect MBCA birds outside federal lands, but this is limited to "habitat to which the [*Migratory Birds Convention Act*] applies." This limitation is problematic because the federal government has sought to restrict habitat protection under the *Migratory Birds Convention Act* to nests only. Accordingly, outside federal lands and migratory bird sanctuaries, protection of the critical habitat of MBCA birds is not only discretionary, it is likely going to be restricted to nests only.¹²¹

SARA defenders note that it provides the federal government with "safety net" powers that can be used where provincial efforts are inadequate. The mechanisms involved, however, are discretionary, and, as its critics have pointed out, the federal government has been very reluctant to employ similar mechanisms found in other Canadian environmental laws.¹²²

According to Smallwood, the "lack of mandatory provisions to protect habitat is the fundamental flaw with SARA. Under SARA, habitat protection comes 'too little, too late.'"¹²³ Habitat protection action cannot commence until two or three years after listing. And SARA thoroughly

¹²⁰ Douglas, "Legislative Summary," 17.

¹²¹ Kate Smallwood, *A Guide to Canada's Species at Risk Act* (Vancouver: Sierra Legal Defence Fund, 2003), 30 (emphasis in original). See also 32-3.

¹²² *Ibid.*, 36. In a recent report card on SARA implementation by Environmental Defence Canada, concerns about delays in implementing safety net provisions contribute to assignment of an "F" grade. See Environmental Defence Canada, *Next Stop Extinction: A Report Card on the Failure of Canadian Governments to Save Endangered Species* (Toronto: Environmental Defence Canada, 2004), 10-11.

¹²³ Smallwood, *A Guide*, 27.

reflects the government's view that stewardship and incentive measures should be the "primary and preferred means of protecting habitat on privately owned lands."¹²⁴ Says Smallwood, "While the conservation community is fully supportive of incentives and stewardship initiatives as a means to protect critical habitat, this approach is all 'carrot' but no 'stick.' The Act fails to provide a legal back up if voluntary initiatives do not work."¹²⁵

One other perspective on the advent of Canada's new endangered species regime should be highlighted. Some environmentalists have expressed concern that the advent of SARA will promote reactive, single-species emphases, undermining or detracting from broad, eco-system-based efforts to conserve biodiversity. As they reflect on how scarce dollars and other resources should be distributed, BC bird conservation forces will have to grapple with finding an appropriate balance between an emphasis on "keeping common birds common" and a focus on species deemed to be in (or headed for) the "emergency ward."¹²⁶ They will, for example, need to participate forcefully in processes such as the current national-level effort to address the cws's longstanding reluctance to enforce MBCA regulations against forest companies that destroy migratory birds and their nests.¹²⁷

CONCLUSION

Despite some notable improvements in the last decade, the toolkit available to BC bird conservationists remains limited. An assessment of its flaws underscores two fundamental concerns. First, it is difficult to conceive how an effective biodiversity regime can be constructed under conditions of declining state capacity. Second, related questions must be raised about whether such a regime can be built with policy instruments

¹²⁴ Ibid., 28, citing Environment Canada, "Canada's Plan for Protecting Species at Risk: An Update," December 1999, Ottawa: Environment Canada, 8.

¹²⁵ Smallwood, *A Guide*, 28.

¹²⁶ For one statement of how the balance ought to be defined, see the Partners in Flight mission statement in T.D. Rich et al., *Partners in Flight*, 4-5.

¹²⁷ Concerns about this issue were at the centre of a recent complaint filed under the terms of the citizen submission (Article 14-15) provisions of the North American Agreement on Environmental Cooperation. As of mid-2004 the Secretariat of the Commission for Environmental Cooperation was preparing a "factual record." In the meantime, various organizations have joined in efforts to develop a permitting regime that would enable the cws to control the forest industry's "incidental take" of migratory birds of "significant conservation concern." See Wilson, "The Commission for Environmental Cooperation"; and Joint Working Group on Migratory Birds Conservation in the Forestry Sector, "Recommendations on Revisions to the Migratory Birds Convention Act: A Forestry Sector Case Study," (unpublished report for Environment Canada, 2 April 2004).

from the soft, incentive- and persuasion-based end of the spectrum. The developments underlying these concerns, as a number of students of Canadian environmental policy have pointed out, are interconnected consequences of the post-1980s triumph of neoliberalism.¹²⁸

Our review of responses to the BC bird conservation challenge raises a number of questions about the consequences of weak state capacity. Do the federal and provincial authorities responsible for the conservation of the province's avian diversity have the capacity to do the science needed to underpin effective conservation planning and action? Do these governments have the capacity to construct politically achievable responses to arguments such as those implicit in Scudder's analysis of biodiversity hotspots? Do governments, for example, have the financial resources needed to achieve protection of critical sites, either through purchases of privately owned land or covenants, or through payment of compensation to users of Crown resources making politically significant claims about economic damage deemed to result from protected area additions or new land-use restrictions? Do the agencies responsible have the capacity to implement the policies so far adopted?

None of these questions generates very promising answers. Provincial government resource ministry budgets and staff levels were cut by about one-third between 1997 and 2002.¹²⁹ Endangered species biologists across the province were among those hardest hit, and ministries have adopted major changes in operating procedures and functions. For example, the Ministry of Water, Land and Air Protection (MWLAP) has abandoned what was for several decades the "bread-and-butter" mechanism for environmental management in the province, the "referral" system review of the impacts of proposed resource developments. The Liberal government has embarked on another round of deep budget cuts, resulting in further reductions in MWLAP's complement of conservation officers, scientific technical offices, parks personnel, biologists, and support staff.¹³⁰ Federal

¹²⁸ See, for example, Judith I. McKenzie, *Environmental Politics in Canada: Managing the Commons into the Twenty-First Century* (Don Mills: Oxford University Press, 2002), III-4; Glen Toner, "Canada: From Early Frontrunner to Plodding Anchorman," in *Implementing Sustainable Development: Strategies and Initiatives in High Consumption Societies*, ed. William M. Lafferty and James Meadowcroft (New York: Oxford University Press, 2000), 57, 79-82; and Boyd, *Unnatural Law*, 237-45.

¹²⁹ West Coast Environmental Law, "The BC Government: A One-Year Environmental Review" (Vancouver: West Coast Environmental Law, July 2002), 15-16; See also Sierra Legal Defence Fund, *False Economy: the Hidden Future Costs of Cuts in Regulatory Services* (Vancouver: Sierra Legal Defence Fund, January 2002).

¹³⁰ See West Coast Environmental Law, *Please Hold: Someone Will Be with You. A Report on Diminished Monitoring and Enforcement Capacity in the Ministry of Water, Land and Air Protection* (Vancouver: West Coast Environmental Law, 2004).

agencies also experienced major staff and budget reductions in the mid-1990s.¹³¹ Although some of the federal cuts have been reversed, the Canadian Nature Federation report on management of federal wildlife sanctuaries suggests continuing capacity problems,¹³² while the advent of SARA has raised questions about the Department of Environment's capacity to take on new responsibilities.¹³³

Our overview suggests some of the effects of weakened state capacity. The bird conservation community is fundamentally committed to basing its conservation planning and projects on solid science. The pace of progress in conservation is tightly linked to advances in monitoring population change, developing credible interpretations of causes, and constructing sound plans for interventions. Given the total number of BC bird species and the complexity of the constellations of threats facing species known or suspected to be in decline, it is not surprising that significant gaps in knowledge continue to impede progress. All of the species group planning documents that guide current conservation efforts are replete with reminders of significant knowledge gaps. For example, North American Waterfowl Management Plan officials acknowledge that "North American waterfowl monitoring programs represent, arguably, the most extensive coordinated wildlife monitoring programs in the world." "Yet," they admit, "despite the substantial effort expended to track population abundance and assess trends, many North American waterfowl populations are currently not monitored sufficiently to estimate population size or establish a population objective."¹³⁴ If this describes the state of knowledge about the group of bird species that has been studied longer and more intensively than any other, then clearly those trying to plan for the conservation of other species face daunting scientific challenges. The problems challenging waterfowl researchers are mild compared to those confronting their colleagues who are trying to monitor and understand forest birds.¹³⁵

A strong response to the challenges of protecting biodiversity requires accelerated scientific progress. State contributions to this effort, however, seem likely to decline rather than to increase. As we have

¹³¹ Boyd, *Unnatural Law*, 239-40.

¹³² Canadian Nature Federation, *Conserving Wildlife*.

¹³³ Sierra Club of Canada, "Rio + 11: The Eleventh Annual Rio (Report on International Obligations) Report Card," (Ottawa: Sierra Club of Canada, 2003), 9; and Environmental Defence Canada, *Next Stop Extinction*, 9-11.

¹³⁴ North American Waterfowl Management Plan, "Strengthening the Biological Foundations, 2003: North American Waterfowl Management Plan Update," first draft for review by plan stakeholders, September 2002, 3 and 60 (Appendix D).

¹³⁵ See McTaggart-Cowan et al., "Avian Diversity," 661.

noted, non-state actors have played an important role in constructing the knowledge base, carrying most of the load in such critical programs as the Breeding Bird Survey. BC volunteers will no doubt continue to make huge contributions. It is, nonetheless, difficult to envisage how their work could ever be expected to compensate for reductions in state support. As well, those who rely on undertakings that depend on volunteers must bear in mind that a large portion of Canada's total volunteer activity is generated by a small and often overworked segment of the population, that BC's rate of volunteering is among the lowest in the country, and that rates of volunteerism appear to be falling.¹³⁶

Assessments of other dimensions of the overall biodiversity conservation project lead to similar concerns. For example, worries raised in the Canadian Nature Federation's study referred to above are paralleled by those flagged by the federal commissioner of the Environment and Sustainable Development in a 2002 report on the "implementation gap" undermining invasive species control programs.¹³⁷ Likewise, it is difficult to have confidence in the cws's capacity to implement SARA (or its capacity to achieve its long-heralded goal of shifting from a game-bird orientation to an "all-birds" orientation) when, in its response to the recent citizen submission to the Commission for Environmental Cooperation, it admitted that it has never had the resources needed to develop a regime capable of enforcing the migratory bird regulations as they apply to the "incidental take" of birds by logging companies or other industries.¹³⁸

Related concerns focus on the mix of policy instruments relied upon by Canadian environmental policy makers. Here, Smallwood's arguments about SARA's "all carrot, no stick" tendencies are à propos. This description might be applied more generally to a range of other bird conservation policy initiatives, raising key questions for bird advocates. Can an effective biodiversity conservation regime be built with soft, incentive-based or hortatory instruments, with instruments from the "carrots" and "sermons" side of the spectrum? No one would argue that governments should not

¹³⁶ Paul B. Reed and L. Kevin Selbee, "Canada's Civic Core: On the Disproportionality of Charitable Giving, Volunteering and Civic Participation," *ISUMA* 2(2) (Summer 2001): 28–33; Andre Picard, "Alert Raised as 1 Million Fewer Now Volunteer," *Globe and Mail*, 18 August 2001; and Douglas Todd, "BC Rates among Worst in Canada for Volunteering," *Vancouver Sun*, 18 August 2001.

¹³⁷ Canada, "Report of the Commissioner of the Environment and Sustainable Development," chap. 4, at <[http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20021004ce.html/\\$file/c20021004ce.pdf](http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20021004ce.html/$file/c20021004ce.pdf)> (viewed 3 June 2003). See also Martin Mittelstaedt, "Threat from Biological Pests on Rise as Budget Needed to Fight Them Falls," *Globe and Mail*, 20 October 2003.

¹³⁸ Wilson, "The Commission for Environmental Cooperation."

experiment with different policy instruments¹³⁹ or deny that it is perfectly natural to prefer softer instruments. But can such instruments be efficacious if they are not “backstopped” by strong regulatory regimes?

Taken together, these points illustrate the problematic assumptions underlying the “ecological modernization” worldview that has dominated environmental policy thinking for the past couple of decades.¹⁴⁰ This worldview is often associated with the “have-our-cake-and-eat-it-too” thinking at the centre of post-Brundtland problem definitions and solutions. Its ascendancy, not coincidentally, began at about the same time as neoliberal currents began to push governments across the industrialized world to “hollow out” the state. The environmental consequences of this hollowing out process have certainly not gone unprotected. But within and around governments in Canada and elsewhere, many environmental policy players have convinced themselves that a weaker state need not mean backsliding on environmental progress; they have even come to think that, perhaps, “more might be done with less.” The myth of costless cutbacks has helped rationalize the growing preference for softer policy instruments, a shift that has gone hand-in-hand with broad attempts to transfer responsibility for environmental management onto the shoulders of non-state partners, including businesses and NGOs.

The middle-class reformers who power many components of the environmental movement have been too reluctant to challenge these shifts. Our earlier treatment of characteristics of the BC bird conservation community suggests that the argument would probably apply to many of its members. A careful analysis of responses to government cutbacks would, we suspect, detect an aversion to adversarial politics and an inclination towards the kind of “pitch-in-and-pick-up-the-slack” approach that gladdens the hearts of Cabinet ministers bent on off-loading state functions onto the shoulders of societal partners.¹⁴¹

¹³⁹ See Boyd, *Unnatural Law*, 248–50. Boyd argues that governments have not fully enough explored the middle ground between the poles of strict regulation and deregulation with voluntary measures.

¹⁴⁰ For a critical summary of ecological modernization theory (and a treatment of interconnections with sustainable development theory), see Gerald Berger, Andrew Flynn, Frances Hines, and Richard Johns, “Ecological Modernization as a Basis for Environmental Policy: Current Environmental Discourse and Policy and the Implications on Environmental Supply Chain Management,” *Innovation* 14, 1 (2001): 55–72. See also M.A. Hajer, *The Politics of Environmental Discourse: Ecological Modernisation and the Policy Process* (Oxford: Oxford University Press, 1995); and A.P.J. Mol, “Ecological Modernisation and Institutional Reflexivity: Environmental Reform in the Late Modern Age,” *Environmental Politics* 5, 2 (1996): 302–23.

¹⁴¹ For related arguments about the “flight-from-politics” tendencies inherent in contemporary environmentalism, see Michael Maniates, “Individualization: Plant a Tree, Buy a Bike, Save

BC bird conservation efforts will continue to be shaped by evolving interactions among the threats facing birds, the characteristics of the conservation community, and the policy paths already embarked upon. Much will depend on the evolution of the community and its approaches. Our sketch has highlighted at least some of the community's strengths. Its manifold accomplishments are testament to its resourcefulness, adaptability, and dedication. At the same time, however, our overview of factors currently undermining attempts to develop effective conservation regimes suggests that further diversification of the community and its approaches would enhance its ability to respond to the underlying challenges.

In particular, the community's influence would be increased by adoption of more adversarial approaches. As we have suggested, bird conservationists have been too shy about asking the fundamental questions of politics – questions about who and what wins and loses as a result of proposed shifts in government priorities and policies. Like most of us who claim to be concerned about the environment, they have been too slow to confront the rationalizations employed by vested interests locked into unsustainable resource use practices and too reluctant to challenge the centres of political-economic power that shape the fate of the landscape. Bird conservationists, like most Canadians, have been reluctant to play politics in tough, multidimensional ways.

Perhaps the most intriguing possibility for those who care about British Columbia's birds and biodiversity is that BC bird conservationists will not just begin to adopt aggressive adversarial approaches but that they will do so in ways that bring cross-border allies into play. Such a turn, it can be argued, must follow inevitably from a strategic assessment of the openings available in an institutional and normative climate shaped by neoliberalism.¹⁴² Like the BC old-growth preservation movement,¹⁴³ that is, bird conservationists will have to rely on new private regulatory forms such as certification and eco-labelling, which depend heavily on external allies. As noted, the importance of the migratory species in

the World?" in *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (Cambridge, MA: MIT Press, 2002), 43–66.

¹⁴² For one interpretation of this turn, see Tim Bartley, "Certifying Forests and Factories: States, Social Movements, and the Rise of Private Regulation in the Apparel and Forest Products Fields," *Politics and Society* 31, 3 (2003): 433–56.

¹⁴³ See Steven Bernstein and Benjamin Cashore, "Globalization, Four Paths of Internationalization and Domestic Policy Change: The Case of EcoForestry in British Columbia, Canada," *Canadian Journal of Political Science* 33, 1 (2000): 67–99. See also, Jeremy Wilson, "'Internationalization' and the Conservation of Canada's Boreal Ecosystems: Exploring Pathways of Transnational Influence," *Canadian-American Public Policy* (forthcoming, 2004).

the BC bird species mix has led to the development of extensive links between BC bird conservationists and their counterparts elsewhere. While these links have mostly been oriented towards the development of research and planning agendas, there lies on the near horizon the possibility that the powerful US bird conservation movement will increase its scrutiny of what is happening to essential Canadian habitat.¹⁴⁴ Expansion of such efforts would transform bird policy dynamics in British Columbia and other parts of Canada, accenting some of the interesting potentials inherent in the transnational characteristics of the bird conservation policy field.

¹⁴⁴ There are signs that this intensification of scrutiny has begun. In early 2003, for example, a group of concerned Americans launched the Boreal Songbird Initiative. The express goal is to educate "birdwatchers and naturalists throughout the United States about the importance of the boreal forest to migratory birds" and to mobilize "US groups and individuals to influence Canadian government and industry policies." See Boreal Songbird Initiative, "What Is the Boreal Songbird Initiative?" at <www.borealbirds.org./about.html> (viewed 14 May 2003).

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