

Communicating Effectively about Young Forest Management to Benefit Associated Wildlife Species

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ABSTRACT To conserve declining populations of American woodcock (*Scolopax minor*; hereafter woodcock) and other young forest-associated species, the Wildlife Management Institute contracted with DJ Case & Associates to assess existing communication efforts and investigate strategies that would help achieve the difficult objective of encouraging private landowners to implement young forest management practices on their lands. Our efforts included a literature review, interviews of 30 natural resources professionals, 7 focus groups with private landowners, and a metadata analysis of National Woodland Owner Survey (NWOS) data. Based on this research, we identified 5 target audiences (private, non-industrial woodland owners, conservation professionals with direct landowner contact, other conservation professionals, residents of forested communities, and hunters, especially woodcock and ruffed grouse [*Bonasa umbellus*] hunters), with objectives for each. We also identified broad strategies for achieving these objectives with each target audience and developed messages based on what these audiences indicated was important to them. Finally, we recommended 3 big-picture actions for the woodcock conservation community to implement the specific communications strategies: 1) design and develop a comprehensive website that provides the information and resources needed by each of the target audiences, 2) create detailed pilot communications campaigns in selected five-county pilot areas, and 3) develop large-scale partnerships among other organizations and entities interested in young forest management. The Wildlife Management Institute and others in the conservation community have embraced and implemented these communication strategies and messages as part of a larger woodcock conservation effort in the Northeast and Upper Midwest USA. Partners have employed many of these messages and strategies in an even broader effort to promote and encourage young forest management throughout the country.

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The *American Woodcock Conservation Plan* (Kelley et al. 2008) established a goal of seeking full recovery of American woodcock (*Scolopax minor*; hereafter woodcock) populations to 1970 levels. To achieve this, the Plan identified the need to add 1.3 million hectares (3.2 million acres) of young forest to existing levels in Bird Conservation Region (BCR) 14 (Atlantic Northern Forest) and another 1.2 million hectares (3.0 million acres) in BCR 28 (Appalachian Mountains).

Given the large proportion of privately held lands in these regions, achieving these lofty goals depends heav-

ily on successful establishment of young forest by private landowners. Unfortunately, establishment of young forest often requires extensive cutting of established forests, which landowners often misunderstand and view negatively.

The Wildlife Management Institute's (WMI) goal for this project was to develop effective communication strategies for encouraging landowners to establish and maintain young forest habitat on private lands. Specifically, WMI wanted to investigate communication strategies to integrate private landowner habitat management interests and

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capacities into programs designed to implement the *American Woodcock Conservation Plan* through identification of critical audiences, testing of key messages, and documentation of optimal delivery mechanisms.

Study Area

We focused specifically on owners of small (~4–40 hectare or 10–100-acre) woodlands in the 11 states that are part of BCRs 14 and 28 (ME, MA, CT, VT, NH, NY, PA, OH, MD, VA, and WV). We did not address communication needs of large landowners, industrial landowners, or public lands managers. However, we did design our efforts to provide foundational insights, approaches, and communications strategies that may be applicable in other areas.

Methods

WMI contracted with DJ Case & Associates (DJ Case) to conduct an investigation and develop a communications strategy centered on increasing creation and management of woodcock habitat on private land. We used the following techniques to develop the communications strategy:

1. *Literature Review*: We compiled and reviewed pertinent literature regarding private, non-industrial woodland owners and management of their forested lands.
2. *Professional Interviews*: We identified and interviewed 30 natural resource professionals who engage in young forest management and outreach on private lands to learn about their efforts, messages, audiences, and assessment of such efforts.
3. *Focus Groups*
 - a. Phase I: We conducted 4 focus groups (1 in NH, 1 in NY, and 2 in PA) with private, non-industrial woodland owners to determine the fundamental reasons why they might choose to either actively manage their land for young forest or not. We tested the appeal of potential messages that stakeholders may use in a communications and outreach campaign aimed at increasing the area of private lands being managed as young forest.
 - b. Phase II: We conducted an additional set of 3 focus groups (2 in NY and 1 in PA) to test communication vehicles (images, messages, tag lines, and print ads) that might be used to encourage private landowner participation in young forest management. We compared and contrasted the characteristics of Phase I focus group participants with those of the Phase II focus groups.
4. *National Woodland Owner Survey (NWOS) Analysis*: We reviewed results of the NWOS (2002–2006) for small woodland owners in BCRs 14 and 28, to determine their understanding of and attitudes

toward forest ownership and management and other natural resource conservation issues (U. 2008). We also compared demographics of and results from survey participants with participants in Phase II focus groups, to determine to what degree focus group participants were representative of the broader woodland owner population, and whether results and insights obtained in focus groups could be applied to the broader population.

Results

LITERATURE REVIEW

We reported our full results in *Annotated Bibliography for Investigating Communication Strategies to Support Implementation of the North American Woodcock Conservation Plan Project* (Christoffel and Case 2009a). What we present here is a condensed version of the primary conclusions presented in our full report.

Although the total forest area has remained relatively constant in the Northeast USA, the amount of young forest has declined in recent years. In addition, fragmentation of forests into ever-smaller ownerships has caused reduction in forest management options. Not surprisingly, most disturbance-dependent species, especially birds, are declining throughout the region.

Private forestlands have the following ownership patterns: 61% of family forest owners in the USA own <4 hectares (10 acres) of forestland, but 53% of the family forestland is owned by people with >40 hectares (100 acres). Most family forest owners own their forestland for multiple reasons, most commonly beauty/scenery, to pass land on to heirs, privacy, nature protection, and part of home/cabin. Few indicate financial motivations. Compared to the general population, a greater proportion of family forest owners are older white males who are more educated and wealthier. Many private forest landowners are interested in the numerous social benefits that private forests produce, including clean water and air, biodiversity, lumber/wood fiber, wildlife for consumptive and non-consumptive uses, recreation, and a scenic backdrop for a rural tourism industry.

The literature we reviewed for our report (Christoffel and Case 2009a) indicated that appearance plays a major role in the use and appreciation of forestland. Of all management actions, clear cutting generally has the greatest negative visual impact, especially if large amounts of slash are visible. This appearance plays a role in how people feel about the technique; significant segments of landowners and the public believe in banning clear cutting. Helping people understand the purposes of forest management practices, however, can help increase their tolerance of practices such as clear cutting.

Most family forest owners do not have written management plans, and few have sought professional advice from

a forester or utilized a public assistance program for forest management. Owners of larger tracts are more likely to seek assistance, and there may be substantial regional differences with respect to the propensity to use forestry services, attitudes toward regulation, and reasons for owning forestland.

Because there are a large number of forest landowners with variable interests and motivations, it is difficult to design programs to encourage them to adopt management to promote young forests, and the landowners' high turnover, diverse objectives, and varied participation present additional barriers. The probability of program adoption is higher when management focuses on amenities, such as wildlife habitat, compared to timber harvests. Most non-industrial private forestland owners want to see a demonstration area before deciding whether to participate.

There are some bright spots. Most family forestland owners appear interested in protecting their land from development, even though few have conservation easements or other protections on their land. To assist identifying landowners who might be interested in establishing young forest on their lands, we segmented NWOS respondents into 4 groups in terms of their interest and engagement in land management:

- Model owners: already exhibit behavior consistent with good land stewardship and sustainable use (but not necessarily management to promote young forests).
- Prime prospects: are not currently engaged in land stewardship activities but are likely to consider it.
- Potential defectors: currently engaging in land stewardship activities but are likely to quit because of lack of interest or other barriers.
- Write-offs: exhibit low levels of engagement in land management and low levels of interest in doing so.

Communication efforts targeted to the first 3 groups (with separate messages and media for each) could help encourage more management to promote young forests among private woodland owners.

PROFESSIONAL INTERVIEWS

We reported our full results in *Summary of Semi-Structured Interviews with Natural Resource Professionals* (Christoffel and Case 2009b). What we present here is a condensed version of the primary conclusions presented in our full report.

We interviewed 30 natural resource professionals representing state agencies, federal agencies, and non-governmental organizations. The average length of employment for the interviewed professionals was 7 years. Most (77%) interviewees contributed directly to outreach associated with young forest and its management, and restricted their activities to a single state, though 23% had regional

responsibilities. The outreach activities most commonly used were individual consultations, presentations, provision of technical assistance, and workshop participation. Private landowners and natural resources professionals were the primary audiences for these outreach activities. Their objectives for outreach activities related primarily to wildlife habitat management, education of landowners, and young forest management. The four key messages most often delivered by interviewees to their audiences included: 1) management and wildlife populations are linked, 2) wildlife and habitats are linked, 3) specific how-to advice, and 4) landowners have responsibilities and opportunities. Most interviewees (73%) indicated they had produced outreach materials related to young forests and/or wildlife for use with private landowners.

Nearly two-thirds of the interviewees indicated that they worked with ≥ 5 partner organizations in their young forest conservation efforts. Only one-third of interviewees had any kind of formal evaluation metrics built into their program/efforts. The evaluation efforts identified by interviewees were generally limited to simple outputs, such as numbers of landowners enrolled or areas treated.

The barriers to young forest management on private lands that were most often perceived by interviewees included negative perceptions associated with cutting trees and with the costs associated with creating and maintaining young forests. Conversely, the most commonly perceived opportunities were education and outreach (these were listed by interviewees twice as often as any other), along with funding assistance.

FOCUS GROUPS – PHASE I

We reported our full results in *Summary of Focus Group Meetings with Private Landowners* (Christoffel and Case 2009c). What we present here is a condensed version of the primary conclusions presented in our full report.

Most participants in the Phase I focus groups indicated they owned their parcels of land individually or jointly. Nearly half had owned their parcel >20 years, and more than half lived on or within 2 km (response was categorized as <1 mile) of their parcels. Four out of 5 indicated they were the primary decision maker for their forest parcels. More than half the participants indicated that their woodland parcel was <40 hectares (100 acres) in size and almost a quarter indicated that their parcels were ~ 40 –80 hectares (100–199 acres) in size. Most said their parcels were $\geq 50\%$ wooded.

Focus group participants said beauty was the most important reason for owning their wooded parcel, while 3 reasons ranked second—to protect the land, to be close to nature, and to provide wildlife habitat. The reason ranked least important was to cultivate/collect non-timber forest products. Nearly three-fourths of participants had participated in some kind of cost-share program on their land,

the most common being the Wildlife Habitat Incentive Program (WHIP) through the USDA Natural Resource Conservation Service. About a fifth of participants indicated they currently had an easement on their parcel.

Most participants had harvested trees on their parcels, most commonly for firewood and saw logs. The sources of forest management information most commonly consulted with were state foresters (79%) and extension foresters (64%).

We asked focus group participants to rank the appeal of eight potential messages for use in a communications and outreach campaign to encourage private landowners to manage or create young forest on their land. The two messages ranked highest by focus group participants were: 1) A diversity of wildlife requires a diversity of habitats; and 2) Early successional forest habitat has greatly decreased in [location], and so have the dozens of wildlife species dependent on this habitat.

FOCUS GROUPS – PHASE II

We report our full results in *Message Testing Focus Group Meetings with Private Landowners (Phase II)* (Christoffel and Case 2009d). What we present here is a condensed version of the primary conclusions presented in our full report.

In the Phase II focus groups, half the participants had owned their parcel >20 years, whereas about a third had owned it <10 years. Two-thirds lived either on or within 2 km (1 mile) of their parcels. Almost two-thirds of participants said they were the primary decision makers for their forest parcels. A majority of participants stated their woodland parcels were >20 hectares (50 acres) in size, whereas about a quarter had parcels of ~40–80 hectares (100–199 acres).

Focus group participants ranked to enjoy beauty or scenery as the most important reason for owning their woodland parcels. Second in importance was to protect nature and biodiversity, and third was privacy. The reason ranked least important was to cultivate/collect non-timber forest products.

Formalized protection of their lands was not common. Only 15% of participants had participated in any kind of cost-share program on their land or had a written management or stewardship plan for their parcels. Only 6% of participants had any kind of conservation easement.

Active management was more common. In fact, all participants had engaged in ≥ 1 management activities on their parcels. Almost three-quarters of focus group participants harvested trees on their parcels, mostly for saw logs. About a third of participants had received advice or information about their woodland parcels. The two sources most often consulted by participants included state Departments of Natural Resources (DNR) employees and private consultants. We asked participants to rank the usefulness of

12 sources for information about woodland management. The sources rated highest included talking with a forester or other natural resources professional; newsletters, magazines or newspapers; publications, books or pamphlets; and talking with other woodland owners. A blog for woodland owners ranked as the least useful of the sources.

During the focus groups, we asked participants to rate the appeal of six images, six messages, seven tag lines, and five print ads. The image with the highest average appeal was that of a stand of mature, deciduous trees; the least appealing image, which scored in the low appeal range, was an image of a clear cut. The message that participants gave the greatest average appeal score was “A diversity of wildlife requires a diversity of habitats”; the least appealing message was “Shrubby habitat helps to preserve privacy”.

Participants rated the tag line “Do right by the land” as the most appealing. The tag line that rated least appealing was “Forever young”. The five print ads that focus group participants rated all received medium appeal scores.

Phase II focus group participants were less familiar than Phase I participants with natural resource professionals and programs, and with the language of natural resource management and conservation. For example, they did not know what a Species of Greatest Conservation Need was and wondered what it meant for landowners. Participants also shared disbelief regarding the message about a decrease in the amount of young forest and the animals dependent on young forest.

NATIONAL WOODLAND OWNER SURVEY ANALYSIS (RESPONDENTS FROM BCRS 14 AND 28)

We report our full results in *Analysis of National Woodland Owner Survey Data for Bird Conservation Regions 14 and 28* (Christoffel and Case 2009e). What we present here is a condensed version of the primary conclusions presented in our full report.

NWOS respondents in BCRs 14 and 28 were similar to Phase II focus group participants in composition, motivations, and preferences for advisors and communication channels. Some specific findings from NWOS participants:

- The average age in both BCRs was >55.
- About 83–85% of respondents were male.
- Most acquired woodland parcels through purchase.
- 73% of owners lived within ~2 km (1 mile) of their woodland parcel.
- Less than 10% of owners in both BCRs had written management plans.
- Beauty or scenery was the top reason for owning woodland, followed by privacy, part of home, and to protect nature and biodiversity.
- The top 3 reasons for conducting management on their property in past 5 years were: private recreation, post land, and road/trail maintenance.

- The top 3 channels through which survey respondents said they could be reached regarding forest management issues were: publications, talk with natural resources professionals, and newsletters, etc.

There were a few notable differences between NWOS respondents and Phase II focus group participants. Focus group participants demonstrated a greater propensity to engage in timber harvest and other land management activities. In addition, focus group participants were more likely to have a written management or stewardship plan, hold a conservation easement on their properties, and to have participated in a cost-share program to manage their woodlands. Overall, results from our comparison suggested that insights gained from the Phase II focus groups were likely to be broadly applicable in communicating about and promoting young forest management to many private woodland owners in BCRs 14 and 28.

COMMUNICATION STRATEGY

We used the results from the four approaches described above to develop a communication strategy for helping to achieve the goals of the *American Woodcock Conservation Plan*. The communication strategy contains four parts: 1) target audiences, 2) objectives and strategies, 3) messaging, and 4) actions.

Target audiences We recommend targeting five specific audiences through the communication strategy for helping to achieve the goals of the *American Woodcock Conservation Plan*:

1. Private, non-industrial woodland owners of ~4–40 hectares (10–100 acres) in BCRs 14 and 28. These end users are prime candidates to implement young forest management on their lands. This communication strategy focused on owners of small parcels, whereas other efforts are targeting large parcel owners.
2. Conservation professionals with direct landowner contact. These people have direct contact with small parcel owners as part of their normal operations/activities. They could be agency or extension staff, members of conservation organizations that encourage young forest management, etc.
3. Other conservation professionals. These are people who have potential contact with end users, and/or whose agencies/organizations have programs or efforts that encourage young forest management.
4. Residents of forested communities. These people live in or near communities that have significant forested area (or lands potentially managed as young forest).
5. Hunters, especially woodcock and ruffed grouse (*Bonasa umbellus*; hereafter grouse) hunters. Hunt-

ers have a stake in young forests because of the positive impacts such forests have on the species they pursue. In particular, a portion of this audience that has a passion for taking action to further support their hunting and conservation interests.

Objectives and Strategies Following is the objective for each target audience, along with our recommended broad strategy for achieving it.

1. Private, non-industrial woodland owners of ~4–40 hectares (10–100 acres) in BCRs 14 and 28
OBJECTIVE: Create and maintain young forests on their lands.

STRATEGY: Because there are so many landowners in this target audience, and because their holdings are relatively small, it is not likely that natural resources agencies and their partners will be able to have direct, face-to-face contact (intensive methods) with enough of them to achieve the overall habitat objectives of the *American Woodcock Conservation Plan*. Therefore, stakeholders must develop, deliver, and evaluate communication methods that are indirect or require less personal contact. A comprehensive website would be a major part of this strategy. This website might be most effective if it had sections targeted to the specific audiences. Direct mail and/or direct e-mail are potential alternatives to encourage landowners to visit a website (perhaps with incentives for participation) along with the use of brochures and information sheets. All communications should include a reference to the website. Landowners said that good ways to deliver information to them included written materials (newsletters, magazines, pamphlets) and other landowners. If the conservation community can identify key landowners (early adopters and influential individuals) in target areas, it might be worth making direct contact with them. If they can be convinced to adopt young forest management, they are likely to have positive influence among their neighbors.

2. Conservation professionals with direct landowner contact
OBJECTIVE: Help woodland owners create and maintain young forests.
STRATEGY: There are conservation professionals who are already making contacts with small woodland owners in the target areas as part of their existing jobs (agency landowner program managers, extension professionals, conservation organization landowner liaisons, etc.). The top priority will be to assess whether these professionals are supportive of young forest management. That is, what do they

know about it? Are they willing to recommend it to the landowners they contact? For some, there may be cultural, economic, or other reasons that they do not recommend (or might even oppose) young forest management to their constituents. Getting these professionals to advocate clear cutting will be an entirely different challenge than getting them to advocate selective cutting. For such conservation professionals, the primary effort becomes learning about their objections to young forest management and showing them the need for and benefits of this management regime. For those who are willing to support and recommend young forest management, the primary effort should be to provide training and materials to help them communicate effectively with landowners about the benefits of young forest management and how it can help them achieve their objectives. They need to know the messages and delivery mechanisms to use and the resources available to help them. If possible, they also should be provided lists of key landowners in key areas (early adopters, influential individuals) who could influence other landowners regarding forest management.

3. Other conservation professionals

OBJECTIVE: Allow and help woodland owners (both public and private) create and maintain young forests.

STRATEGY: There are numerous conservation professionals who have indirect contact and interaction with small woodland owners and/or who administer public forestlands. These professionals may have the opportunity to support (or oppose) young forest management through their work and interactions. Educating them about the importance and benefits of young forest management will help support efforts to promote and manage young forests and associated wildlife. For agencies that administer public forestlands, the primary effort should be to encourage young forest management wherever appropriate. Rotating demonstration areas (with easy access) that provide local examples of what young forest management looks like over time could be particularly important in encouraging other landowners to promote and manage young forests. In addition, young forest supporters need to emphasize coordination among all conservation professionals, so all know about the decline in young forests and associated species.

4. Residents of forested communities

OBJECTIVE: Allow creation and maintenance of young forests on public and private lands.

STRATEGY: Even if they do not have direct control over the land, residents living in and around forestlands may have significant influence over land management. For instance, if the common feeling among residents is to ban clear cuts because they look terrible, these residents may be able to bring tremendous pressure to bear on landowners to avoid this type of management. On the other hand, if these residents understand the benefits of young forest management, they are less likely to oppose this management regime, and may instead support it. The primary objective for this audience is informed consent. The conservation community should identify key areas where tracts of forestlands are interspersed with homes, and attempt to communicate extensively with the residents over time about the benefits of young forest management. Communication should address the clear cutting issue head on. That is, we should not try to convince people that clear cutting is not ugly to the eye. Rather, messaging should focus on how ugly is good in other ways, and how ugly grows quickly into beautiful. Messaging should focus on creating social acceptance. If residents in and around a forested area are not actively opposed, it will be much easier for the landowner(s) to adopt young forest management. This will continue be a communications challenge that will take time to achieve.

5. Hunters, especially woodcock and grouse hunters

OBJECTIVE: Advocate for and support creation and maintenance of young forests on public and private lands.

STRATEGY: Young forests benefit many species of hunted forest wildlife, so hunters should be strong proponents for this management regime. However, some hunters do not recognize or understand this connection. The conservation community needs to communicate with hunters the fact that in many cases, the more young forest that is available, the more animals they will have to pursue. With the advent of electronic licensing systems, it is possible in many states to identify hunters who buy specific license types. For instance, in many states, resource professionals need to identify and communicate directly with woodcock, grouse, wild turkey (*Meleagris gallopavo*), and deer (*Odocoileus* spp.) hunters, all of whom benefit from young forest management. This will require cooperation from the state wildlife agency, which should be a natural partner in promotion of young forest management. Sportsmen's groups and conservation organizations (e.g., National Wild Turkey Federation, Ruffed Grouse Society, and others) should encourage their

members to advocate for young forest management in key areas. Members of these organizations are often passionate, action-oriented people who could be well suited for this type of work. Hunter-related organizations could develop demonstration areas that show what young forest management looks like, and they could sponsor and administer information-sharing campaigns among their members and/or landowners in key areas.

Messaging When developing messages, the conservation community should always take into consideration target audience, regional considerations, and context of usage, but in general, messages should include and/or depict natural beauty and scenery—the most popular reasons that focus group participants gave for buying their lands. Another strong motivator was conservation of wildlife and nature for future generations, especially within their own families. Because landowners want to contribute to healthy ecosystems, communicators should feature the fact that young forests contain high plant and animal diversity. Similarly, landowners are interested in conserving wildlife and nature close to home. To engage audiences, communicators should feature iconic species of local or special interest. Not all landowners will care about woodcock conservation, but other species may motivate them to take action.

Messages should use this wording:

- *Young forests* — Focus group participants liked this wording; it evokes a sense of a healthy, vigorous ecosystem
- *A diversity of wildlife requires a diversity of habitats* — This was the top-rated message as identified by focus group participants

Messages should NOT use this wording:

- *Early successional* — most people do not understand what this term means
- *Shrub or Scrub* — both of these terms had negative connotations for most focus group participants
- *Woodcock as the lead concept* (except with the hunter audience) — many people do not know what a woodcock is, and may not care about woodcock conservation
- *Jargon such as Species of Greatest Conservation Need (SGCN) or State Wildlife Action Plan (SWAP)* — Nothing makes people lose interest in a message faster than seeing an acronym they do not recognize. It tells them that they are not the intended target audience, so they do not need to pay attention.

Recognize that getting small woodland owners to adopt young forest management will be a big challenge. Most landowners bought their land for beauty/scenery, and there is no way to convince them that a clear cut is as beau-

tiful as mature woodland. We recommend messaging that focuses on the other benefits provided by young forest management.

Actions Following are 3 key actions the conservation community should take to persuade small parcel landowners to implement young forest management on their lands in BCRs 14 and 28 for the purpose of achieving goals of the *American Woodcock Conservation Plan*. That is, these actions are designed to benefit woodcock habitat specifically, not just young forests. The third action broadens the effort beyond woodcock conservation—to seek synergies and economies of scale—but woodcock conservation is the ultimate goal of all efforts.

The first key action is for the conservation community to design and develop a comprehensive website that provides the information and resources needed by each of the target audiences. We recommend segmenting the site to customize various sections specifically for each of the target audiences. Young forest management is a complex topic, and a well-built website affords the opportunity to tell the full story in nested fashion, so people can access as much or as little information as they need. Communicators should research existing websites that already deliver various pieces of this information, and build the site to complement and leverage these efforts. It will also be important to create section(s) of the site that encourage and sustain two-way communications with the target audiences. An on-line community for the effort could be helpful for encouraging two-way communications and for building relationships between and among the target audiences.

The second key action is to develop Five-County Pilot Areas that include detailed communications campaigns to increase young forest management on private lands in ≥ 1 limited areas (5 counties within 1 state, perhaps). There is too much variability (habitat types, programs, social norms, etc.) across the range of woodcock for partners to effectively implement a single communications campaign. Each of these pilot areas should be large enough to show impacts, but small enough so stakeholders can deliver a reasonable amount of communications and assess impacts in a meaningful manner. These pilot area campaigns should be customized to the local landowners, ecology, assistance programs, and wood markets. If these pilot campaigns show positive results, we recommend expanding them to encompass broader areas. Managers should consider developing a specific campaign plan for the pilot area. The plan should identify and take advantage of the habitat types, landowner programs, audiences, iconic species, and other issues specific to the local (5-county) area. Managers should design/develop/conduct a series of workshops/presentations with natural resource professionals in the pilot areas to convince them of the need for young forest man-

agement (as necessary) and to share the key messages and communication tools and techniques they should use with private woodland owners (electronic presentation, printed materials, etc.). Materials should identify and include information on all currently available funding/cost-share programs, and we recommend designing all materials to share a family look with the design of the website. Ideally, the conservation community would create a network or registry of small woodland owners who are engaged in young forest management, and would ensure they understand the key messages so they can advocate for young forest management with other landowners who may contact them. Finally, it is important to include evaluation metrics in all actions so partners can assess increases in area of young forest on private lands, improved knowledge/attitudes among target audiences, and utility of specific techniques and methods used in the campaign.

The third key action is development of large-scale partnerships. The use of broad-scale communication efforts to reach landowners across large geographical regions to support young forest management for woodcock conservation is not strategically justifiable. That is, there are not enough landowners interested in woodcock conservation to make such a strategy succeed, and this approach probably is not economically feasible, either. Other organizations and partners, however, have interest in young forest management, though not necessarily in woodcock conservation. Deer, grouse, wild turkeys, golden-winged warblers (*Vermivora chrysoptera*), and a wide array of other wildlife and plants are dependent on young forests, just like woodcock. A wider array of species of interest will bring a much larger support base to advocate on the issue. Messages that all such groups hold in common include: 1) young forests are important for healthy ecosystems; and 2) timber harvest and other forest management, when done responsibly, benefit many types of plants and wildlife.

Practitioners should recognize that not all young forest management efforts benefit woodcock. For instance, young forest on arid, upland sites may be of limited value to woodcock due to limited food availability, but partnerships can create synergy of effort for all partners and help create informed consent for young forest management with the broader public.

Discussion

We developed the following guiding principles based on the results described above. We recommend their consideration during the planning and implementation of communication efforts regarding development of young forest management for woodcock habitat in BCRs 14 and 28. We do not list the guiding principles in any particular order.

We recommend directing communication efforts to a broader audience than just woodcock fans. Efforts can focus on a single ecosystem or habitat type (young forest),

but should cover all species, both animals and plants, that benefit from or require young forest for survival. Specific target audiences (see below) should receive specific messages, but the overall campaign should not be limited to any single target audience. Support for woodcock conservation alone probably is not broad or deep enough to achieve habitat goals (such as those of the *American Woodcock Management Plan*), but support for other plants and animals of young forests can assist tremendously.

Communication efforts should focus on the fact that young forest management is necessary for the survival of a host of declining species of wildlife and plants. Next to beauty/scenery, the highest rated reason for owning woodland property for most landowners was protecting nature or biodiversity. A simple description of the ecology of young forests will be compelling for many landowners.

Many private woodland owners have negative perceptions about how young forest management (especially clear cutting) will make the land look. Most bought their land for beauty or scenery, and they are concerned that clear cutting will create an eyesore, or that young forest will not be as picturesque as mature forest. We believe it is important to communicate to them the management options (techniques, spacing, and timing) that will address their concerns.

Partners must continually communicate with private landowners to encourage the establishment and maintenance of young forests on their lands. Young forests are always growing into older forests, and even if partners achieve the lofty habitat goals of the *American Woodcock Conservation Plan*, area of young forest will not be maintained automatically. Partners will need to provide continual and considerable effort to communicate the benefits of young forest management to landowners and their heirs.

Most woodland landowners have harvested trees on their property, most often for firewood or saw logs. This suggests that they do not oppose harvest per se; however, asking them to implement a clear cut is very different from cutting firewood or implementing a selective cut. They will need to understand how young forest management can fit with their other objectives when considering the management of their land.

For a large majority of woodland owners in our target audience, financial return is not a primary motivating factor for owning their lands. However, the financial implications of implementing young forest management (lack of sufficient return, poor timing of return, etc.) might be a significant obstacle to them changing the way they view managing their property with considerations for young forest.

Many woodland landowners do not speak the language of natural resources conservation. Many have limited or erroneous understanding of even the most basic ecological concepts, not to mention forest management techniques

and programs. It is critical that the conservation community begin with very basic, non-technical, non-jargon approaches to communicate the benefits of young forest management with this audience.

Many landowners are willing to meet with experts. Nearly 1 in 5 NWOS survey respondents sought forest management advice in the past 5 years, and most indicated that the best way to communicate with them was through a natural resources expert. State agency natural resources staff, extension experts, and private consultants were sources most often sought for advice and deemed most credible.

Face-to-face meetings are preferred for delivering key messages to target audiences, but there are far too many small woodland landowners (those owning between ~4–10 hectares [between 10 and 100 acres]) to be reached this way. Reaching this diverse and far-flung audience will require use of extensive communication techniques such as websites, publications, and other media. There is a need for more and better evaluation of outreach efforts. Currently, we know very little about what methods are effective at getting landowners to adopt young forest management on their lands.

Management Implications

Achieving the goals of the *American Woodcock Conservation Plan* in BCRs 14 and 28 will depend upon cooperation and participation from private landowners throughout the region. Building this cooperation and participation will require strategic and effective use of communication efforts. Given the diverse and far-flung nature of the private landowners in these BCRs, communications will need to rely on extensive (rather than intensive) efforts. That is, the woodcock conservation community will need to develop and implement communications that deliver its messages broadly across its target audiences, and only focus intensive efforts on a few key landowners who control large or critically important lands. Our results and recommendations provide guidance for communicating effectively with small woodland owners in BCRs 14 and 28, but are also likely to be effective in other BCRs. However, given limited resources, we recommend implementing and evaluating the actions we proposed through pilot-area campaigns, and refining as appropriate before expanding efforts into other regions.

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