



Steppingstones



NEWSLETTER OF THE DEPARTMENT OF DEFENSE PARTNERS IN FLIGHT PROGRAM

DoD PIF Reps Meet to Update Strategic Plan

DoD manages nearly 30 million acres of land across hundreds of installations. Many of these installations provide crucial breeding and stopover habitats, and form the *Steppingstones of Migration* that birds need to survive. DoD Partners in Flight (PIF) is committed to ensuring these steppingstones, and the species that depend on them, are sustained for future generations.

On 4-7 August 2008, the DoD PIF representatives met in Flagstaff, Arizona, to develop content and a structure for the DoD PIF Strategic Plan (Plan), which is currently undergoing its second update. The revised Plan will set the structure for the DoD PIF national program for the next five-to-ten years. Using a facilitated process, the group identified 10 top priority goals and objectives that will form the Plan's basis, as well as the basis for a system to quantitatively measure DoD PIF's accomplishments. The goals and objectives are listed below:

Mission Support: Develop and implement conservation strategies that balance mission support while minimizing impacts to

priority birds and habitats, including those to address climate change, sustainability/readiness, and BASH.

Stewardship: Contribute to sustaining viable bird populations through sound stewardship on DoD lands. Objectives include demonstrating national leadership on bird conservation issues, and promoting and implementing conservation strategies.

Partnerships/cooperation: Identify and participate in conservation partnerships outside of installation boundaries

to establish relationships and to develop and implement plans for conservation. Also cooperate internally at the installation-level with, for example, training components and public works departments.

DoD Policies and Programs: Integrate bird conservation goals across relevant DoD policies and programs through strategic planning and decision-making in support of the military mission, prioritizing actions that benefit species of concern, and preventing future listings.

Guidance and Communication: Ensure productive and effective two-way communication within DoD and with non-DoD stakeholders. Guidance documentation to support policy and program management includes, but is not limited to, DoD policy and State Wildlife Action Plans (SWAPs), as well as DoD, regional, national, and international PIF plans.

Habitat and Species Management: Encourage development and implementation of optimal habitat and species management practices, as appropriate and in accordance with mission requirements, to support DoD PIF goals and objectives.

BASH (Bird/Wildlife Aircraft Strike Hazard): Support the reduction of BASH risk through ongoing cooperation among stakeholders, including air safety and natural resource managers, and by supporting technologies that assist in BASH risk reduction, such as radar and acoustics.

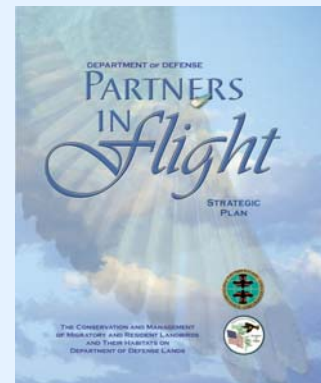
Monitoring: Implement a monitoring program to better understand the status of bird populations and the response of birds to environmental conditions, including management activities, and to meet regulatory requirements.

Continued on page 11...

INSIDE:

- DoD PIF Strategic Plan update..... 1
- Fort Riley Case Study.....2
- Coordinated Bird Monitoring3
- Policy Perch.....4
- Useful Websites.....4
- State of the Birds5
- Don't Let Your Cat Go AWOL Brochure Reprinted.....5
- La Tangara Newsletter.....5
- Site Profile: NAES Lakehurst.....6
- PIF Bird Conservation Plans8
- Cross-Bird Puzzle9
- Army Increases Burrowing Owl Habitat in Oregon 10
- Issue: Global Climate Change 11
- Field Notes..... 12

Conserving birds and their habitats on Department of Defense lands.



The Strategic Plan can be found at www.dodpif.org

Birds and Bombs at Fort Riley: A Case Study Summary

Fort Riley, a 100,656-acre Army installation, lies in the Flint Hills Region of northeastern Kansas. This region has retained more tallgrass prairie than all other prairie states and provinces combined. The tallgrass prairie, now at less than four percent of its original cover in North America, provides habitat to unique native bird species, including the Henslow's Sparrow, populations of which have declined 68% over the last 30 years due primarily to habitat loss and degradation.

Early in the 1990s, Fort Riley initiated regular bird surveys and implemented management prescriptions specifically to enhance Henslow's Sparrow habitat. As a result, the U.S. Fish and Wildlife Service (FWS) identified Fort Riley as a major breeding site for Henslow's Sparrows in 1996.

Fort Riley continued its stewardship for Henslow's Sparrows when it developed its Integrated Natural Resources Management Plan (INRMP). To meet conservation objectives while fulfilling the installation's mission, land managers met with military training staff early in the INRMP process to discuss future land management needs from the mission perspective. The result of these efforts proved that ongoing collaboration facilitates cost-effective management and conservation measures that benefit both the mission and the resource.

Because Henslow's Sparrows will not nest near trees or in areas with over-abundant brush, the INRMP incorporates plans to remove trees and remove or thin over-abundant brush in prairie habitats, thus creating more nesting habitat. Henslow's Sparrows prefer fields larger than 60 acres, so removing lines of trees can reduce field fragmentation. Prescribed burning and hay-cutting keep woody encroachment in check, and reduce the fuel supply for wildfires. In addition to these general measures, the INRMP delineates that areas of particularly high quality habitat be rotated as "no-burn" areas, and dictates that hay cannot be cut until after July 15th when the chicks have fully fledged. The INRMP also includes provisions to monitor the effectiveness of various management efforts.

Owing to early INRMP collaboration between the installation natural resource managers and the training and range support



Live fire training helps sustain the prairie at Fort Riley.
Photo: Courtesy of Fort Riley

staff, Henslow's Sparrow conservation measures not only benefited the bird and its habitat, but also advanced the installation's mission. This is because force-on-force maneuver training requires open space, and weapons firing lines must be kept clear of trees. Clear vistas also allow field commanders to safely and readily observe troop maneuvers. Further, INRMP measures to limit catastrophic wildfires also protect soldiers and equipment.

"While not every natural resource management effort needs to support the installation's mission, no action should compromise it."

Since 2001, the Army at Fort Riley has shifted to employing smaller units, using smaller parcels of land per training event, and training more frequently. Consequently, a land management plan that operates on a finer scale will be more effective while juxtaposed hayed, burned, and unburned areas will furnish commanders with more options when conducting training.

In the past, land management decisions were made on a training area basis (500-1,500 acres), which was the smallest area that would be burned at one time. Now, a training area will be the largest unit for a prescribed burn with some burns as small as 10 acres. This change will increase the duration of the burning season by six months and, coupled with a change in hay cutting whereby farmers will cut many fields only every other year rather than annually, will result in a greater juxtaposition of varying year-round habitats.

In addition, Fort Riley has begun developing conservation agreements with adjoining landowners, often assisting these landowners with prairie restoration efforts (primarily through clearing trees) if the landowners agree to implement management practices that benefit native prairie bird species. Partnering with landowners will not only create more habitat and help bolster bird populations, but also will establish a rapport and trust that may later be needed.

While not every natural resource management effort needs to support the installation's mission, no action should compromise it. The partnerships formed early on between the natural resource staff and the range support staff provided a strong and mutually beneficial basis for Fort Riley's INRMP. Collaboration with the state, FWS, and local landowners has resulted in an INRMP that provides a comprehensive strategy for protecting and monitoring Henslow's Sparrow populations and sustaining the viability of the tallgrass prairie ecosystem, while simultaneously facilitating Fort Riley's capability to support the DoD mission and maintain its positive relationships with external stakeholders.

Editor's note: This article was summarized from one that appeared in the Spring 2006 Federal Facilities Environmental Journal, written by Chris Eberly (DoD PIF) and Jeff Keating (U.S. Army, Fort Riley). The summary was written by Kyra Wiens and Alison Dalsimer (Booz Allen Hamilton). The original article is available at www.dodpif.org.

Coordinated Bird Monitoring Plan

Significant progress has been achieved in recent years to better identify an efficient, coordinated approach to monitoring avian resources. Monitoring has historically been done without much consideration for monitoring actions outside a given agency, and sometimes without a clear articulation of what management question is being targeted. With limited budgets and resources, it is imperative that we maximize the effectiveness of any monitoring project, including the archiving and analysis of monitoring data.

The CBM Plan will help DoD resource managers make better decisions about monitoring avian resources.

In February 2007, the Monitoring Sub-committee of the US North American Bird Conservation Initiative (NABCI) released its report, "Opportunities for improving avian monitoring" (www.nabci-us.org). The report, prepared by a distinguished panel of 16 experts in bird monitoring, emphasizes the importance of clearly understanding the management issues that monitoring will be used to address before initiating new surveys. The report establishes four goals and contains four recommendations to achieve these goals. A series of action items is also presented, by which the recommendations and goals can be achieved. DoD has signed a Memorandum of Understanding (MOU) with other agencies endorsing the report.

Two other notable, recent events in bird monitoring were the signing of an MOU (pursuant to Executive Order 13186) between DoD and the US Fish and Wildlife Service "to promote the conservation of migratory birds" and the adoption of a Final Rule pertaining to "take of migratory birds by the Armed Forces." The MOU became effective on August 30, 2006; the final rule became effective on March 30, 2007. Both measures include strong language on the importance of monitoring bird populations.

Over the last several years, the US Geological Survey (USGS) was contracted to develop a comprehensive approach to bird monitoring for DoD. The approach, termed the DoD Coordinated Bird Monitoring (CBM) Plan, is intended to insure that DoD meets its legal requirements for monitoring birds in the most efficient manner possible. The final report of that project will be delivered by the end of 2008 and will be available on www.dodpif.org. However, the CBM Plan will be continually updated with implementation guidance and case studies as they

become available. "Monitoring" is used in a broad sense to include short-term assessments and effectiveness monitoring as well as long-term "status monitoring" programs. The DoD CBM Plan is consistent with recommendations in the NABCI monitoring report and the Northeast Coordinated Bird Monitoring Partnership's forthcoming "Northeast Bird Monitoring Handbook" (www.nebirdmonitor.org). Four deliverables are identified in the DoD CBM Plan:

1. A review of existing bird monitoring programs on DoD lands
2. Guidelines for the design of bird monitoring surveys on DoD lands
3. A plan for monitoring bird species of concern on DoD lands
4. Recommendations for DoD's role in continental bird monitoring programs

A CBM database was created to allow the entry of habitat variables into a standardized database. The new "Coordinated Bird Monitoring Database" is maintained by the USGS National



DoD PIF Rep, Gene Augustine, conducting monitoring activities in Alaska. Photo: Chris Eberly

Biological Information Infrastructure (NBII) program. It is meant to be used in combination with the eBird program (for entering fairly simple observations) and the Avian Knowledge Network (for storing a reduced set of variables). These databases will insure that inventory and monitoring data sets are collected and permanently preserved in long-term repositories so. Associated tools also will ensure that our data are available for various analyses (e.g., trends, assessment of relative importance of installation lands for a species). Information on implementing the Plan's guidelines will become available as the Plan is finalized.

- Chris Eberly, DoD PIF Program Coordinator

Policy Perch: A View From Washington, DC

Welcome to the Policy Perch. I hope to provide readers with a perspective on national initiatives that will affect many of your bird conservation efforts.

I'd like to start with what may be our most important bird-related planning effort since the inception of DoD PIF more than 15 years ago. At Flagstaff this past August, work began on a third DoD PIF Strategic Plan. This latest revision is important for several reasons:

- ◆ It will be our first and best opportunity to demonstrate the importance of bird conservation to DoD mission and stewardship needs to the new Administration. Accordingly, it will be signed out by the new top DoD Environmental official. And, it will be introduced at the 2009 Sustainable Military Readiness conference in Phoenix next August.
- ◆ Future discretionary investments in bird projects will be informed by the Plan's priorities.
- ◆ Progress on plan objectives will be easier to track and the contributions of each DoD PIF representative to overall Plan success will be more obvious.
- ◆ Development of the new Plan, its goals and objectives, and its reporting procedures will be used as a model for an even larger endeavor on which we will soon embark — A Strategic Plan for All DoD's Natural Resources.

Other new or ongoing initiatives include a possible incidental take permitting system, issuance of final eagle guidelines, and the completion of DoD guidance elaborating on the Migratory Bird Rule.

For more than seven years, it has been the stated intent of the FWS to develop a mechanism to issue permits for incidental takes related to routine federal agency land management actions. An essential first step required by FWS — the signing and implementation of MOUs as required by Executive order 13186 — has been a long time coming. As of September 2008, only two agencies — Defense and Energy — had completed MOUs. The FWS is now redoubling its efforts to complete all remaining MOUs and start developing BCR-based regional permits. Preliminary plans call for conducting NEPA-based analyses of those land management actions most significant to agencies within each region.

Most of the Bald Eagle population in the lower 48 states is now delisted. Yet, the Bald and Golden Eagle Protection Act and the MBTA (and the ESA in the Sonoran Desert of Arizona) provide continued protection, and FWS management guidance issued in June 2008 establishes a regulatory definition of “disturb” and describes ways to avoid and minimize disturbance to eagles. Beyond laws and regulations, DoD has a special bond with our national symbol. The Bald Eagle is prominent on the seals of

DoD and all the Military Services, as well as on many other items important to DoD's military history and traditions. It should be incumbent on all within DoD to avoid any adverse effects on this important national symbol.

The issuance of internal Migratory Bird Rule guidance has proven more challenging than expected. I expect the core information will be extracted from the current longer draft document and issued soon. Development of guidance to implement NEPA is a more complex issue that will require input from HQ attorneys.

As this is my first newsletter column, let me close with an open invitation — for your comments, questions, ideas for future columns. My responses may not always be immediate, but I do strive to eventually read and answer each email I receive at Peter.Boice@osd.mil.

- L. Peter Boice, DoD Conservation Team Leader



Useful Websites

✦ DoD Partners in Flight Program

www.dodpif.org

Completely redesigned web site!

✦ DoD Legacy Program

www.dodlegacy.org

The main proposal application and project tracking site for the Legacy Program. The site contains information on all funded and unfunded efforts, including fact sheets for all recent projects.

✦ Avian Power Line Interaction Committee

www.aplic.org

Resources and guidelines to minimize adverse impacts and to protect avian species on power lines.

✦ Fatal Light Awareness Program (FLAP)

<http://flap.org>

The program is working to safeguard migratory birds in the urban environment through education, research, rescue, and rehabilitation

✦ The Institute for Bird Populations

<http://birdpop.org>

Takes a global approach to research and the dissemination of information on changes in the abundance, distribution, and ecology of bird populations.

The State of the Birds

The National Audubon Society released the first national *State of the Birds* report in 2004, documenting the health and abundance of North America's birds. *Common Birds in Decline*, released in 2007, analyzed 40 years of Christmas Bird Count and Breeding Bird Survey data. Some key messages include:



- ✦ Almost 30% of North America's bird species are in "significant decline"
- ✦ 70% of grassland species are in statistically significant declines
- ✦ 36% of shrubland bird species are declining significantly
- ✦ 25% of forest bird species are declining significantly
- ✦ One in eight of the world's birds (1,213 species in total) face extinction
- ✦ The farmland bird index for Europe has declined by 34% since 1966
- ✦ Over 7,500 sites in nearly 170 countries have been identified as Important Bird Areas
- ✦ Eastern Meadowlarks (72% decline since 1967) and other grassland birds are threatened by changing agricultural practices like biofuels and conversion of Conservation Reserve Program lands
- ✦ Agricultural expansion and intensification threaten 50% of Important Bird Areas (IBAs) in Africa
- ✦ 64% of Globally Threatened Birds, most of them in the tropics, are threatened by unsustainable forestry
- ✦ Non-native invasive species impact 67% of Globally Threatened Birds on oceanic islands
- ✦ Scaled conservation investment is over 20 times higher in developed than developing countries

But there is also good news:

- ✦ IBAs form a global network of sites that identify a full set of key biodiversity areas, especially where information for other taxa is scarce or patchy
- ✦ Conservation actions are underway for 67% of Globally Threatened Birds

For more information see: www.audubon.org/bird/stateofthebirds

La Tangara

La Tangara is the bimonthly newsletter of PIF's International Working Group, a hemisphere-wide bird conservation initiative. Since its creation in 1995, La Tangara's readership has grown to over 1400 individuals and organizations in the United States, Latin America, Caribbean, and Europe, and is recognized as a critical exchange mechanism for information on Neotropical bird conservation.



José M. Zolotoff-Pallais, editor of La Tangara, has created a terrific new web site for the newsletter.

La Tangara is now available directly from the web. Current and past issues can be found at:

www.latangara.org/indexeng.htm

Boletín del Grupo de Trabajo Internacional de Conservación en Vuelo
 sus miembros de Conservación de Aves en el Neotrópico

Revista por el Servicio de Pesca y Vida Silvestre de Estados Unidos. Producida por el Grupo de Trabajo Internacional de Conservación en Vuelo

CONTENIDO

Noticias y Anuncios

- Mesa Nacional de Avifauna-Buena Vista
- Bird de conservación de aves de Costa Rica
- Bodega Salvadoreña recibe certificación de cumplimiento de la HACCP
- Primer registro de nidada para una colibrí de Lantz-Gallardo
- Se necesita información sobre Echinidae en las Neotrópicas
- Primer año de la Red Neotropical de Reservas para Aves Peligrosas en Paraguay
- Adapte su país para su conservación en Colombia
- SAVE Brazil agradece a los dueños de terrazas que ayudan a salvar a las Bats
- Premio 2008 Nido Conserv

Noticias del Internet

Fondos

Oportunidades de Entrenamiento / Trabajos

Reuniones

Publicaciones Disponibles

Literatura Reciente

NOTICIAS Y ANUNCIOS

MESA NACIONAL DE AVIFAUNA - BUENA VISTA.

La Mesa Nacional de Avifauna es un organismo de instituciones que representan al sector público (Departamento de Turismo - DINTUR - y Consejo Nacional de Areas Protegidas - CONAP) el sector privado (Asociación de Operadores de Turismo de Guatemala - ASOPTUR, la Asociación de Reservas Naturales Privadas - ARNP, la Asociación Nacional del CAFE - ANACAFE, The Nature Conservancy, Fundación Cofreventes de la Naturaleza, Cuatrecasas Entrenamiento), y más y el sector académico (Universidad del Valle de Guatemala y San Carlos, e Instituto Tecnológico de Operaciones y Productividad - INTECAP). Nuestro vision es desarrollar la actividad de observación de aves en el país y de promover a Guatemala como un destino de calidad mundial para el aviturismo. Se conformó en el 2004 y se ha desarrollado en torno a 5 áreas de trabajo principal: 1. Fortalecimiento institucional y gestión Financiera; 2. Desarrollo de productos aviturismo; 3. Operación; 4. Marketing; y 5. Investigación. Venos documentos sobre aves y aviturismo en Guatemala han sido publicados y pueden solicitarse en info@mesa.org.gt; mesa@mesa.org.gt o mesa@mesa.org.gt. Anualmente se organiza un evento de cultura aviturismo, y los

Don't Let Your Cat Go AWOL Brochure Reprint

When families deploy or are transferred, pet cats often get left behind. Military bases struggle with how to manage these abandoned domestic and resulting feral cat populations. DoD PIF's brochure, *Don't Let Your Cat Go AWOL*, provides useful information on dealing with this important and complex issue.



Cat captures a Yellow-rumped Warbler at a bird bath. Photo: Dr. Gil Ewing

For a copy of this brochure please contact Jane Mallory at Jane.Mallory_ctr@osd.mil

The brochure is also available online: <https://www.denix.osd.mil/DoDPPIF>

Site Profile: Lakehurst NAES, NJ

Lakehurst NAES (Naval Air Engineering Station)

Location: In the Pinelands National Reserve, New Jersey, 50 miles south of Manhattan, 45 miles north of Atlantic City, and 13 miles inland from the Atlantic Ocean

Land Size: 7430 acres

Mission: World leader in aircraft launch and recovery equipment (i.e., operation of aircraft to and from aviation platforms)

Bird Conservation Region: New England/Mid-Atlantic Coast (BCR 30)

Military airfields in the northeastern U.S. (i.e., Mid-Atlantic and New England) provide critical habitat to grassland bird species, a guild that has experienced steep population declines over the last 40 years. If properly managed, these military airfields can be important for maintaining stable breeding populations of grassland birds, and have been specifically identified as key components in the conservation of rare and threatened species. In the primarily reforested and developed northeast, airfields appear to be especially important for eastern

The Upland Sandpiper (*Bartramia longicauda*) is listed as threatened or endangered in 10 northeastern states.

populations of Upland Sandpiper, which is listed as threatened or endangered in 10 northeastern states, and Grasshopper Sparrow, also listed as threatened in several states and in need of "immediate management" in the region. Because such a large proportion of northeastern grasslands has been lost to landscape processes such as development, cultivation, and succession, airfields in the region are expected to play an increasingly important role in grassland bird conservation.

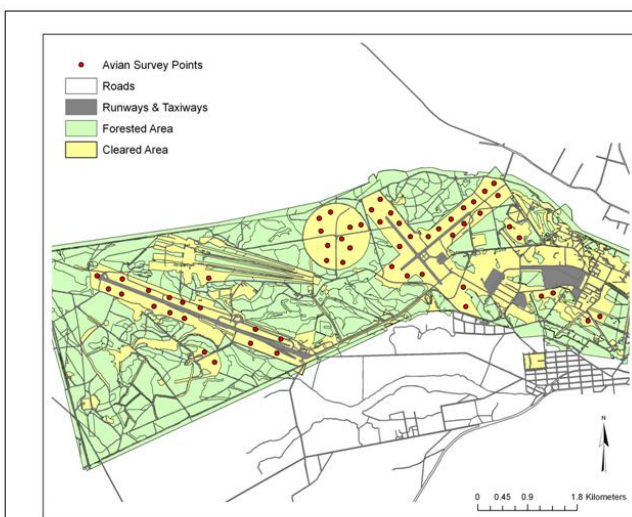
Current management practices at military airfields focus on complying with Bird/Wildlife Aircraft Strike Hazard (BASH) regulations and, to the extent it does not conflict with the military mission, enhancing habitat for state and federally listed grassland dependent species. Mowing is the most common management technique employed on airfields, with the goal of maintaining vegetation at 7-14 inches to deter "problem," or high collision-risk birds such as large (e.g., Laughing Gull, Canada and Snow Goose, Mute Swan) or flocking (e.g., Red-winged Blackbird, European Starling) species.



Lakehurst NAES houses the largest population of breeding Upland Sandpiper in New Jersey. Photo: Bill Dalton

Although mowing to 7-14 inches has been identified as the best practice for preventing problem species, few regional data are available to indicate that this practice is preferable to maintaining grass at shorter or taller thresholds. For instance, it has been demonstrated that some high-risk species, such as Laughing Gulls, may prefer short grass due to increased beetle density and accessibility. Research conducted in the central U.S. indicates that prescribed burning can be more effective than mowing for sustaining healthy populations of some priority species, such as Upland Sandpipers. Such information underscores a need for similar research and monitoring on airfields in the northeast. In general, mowing and burning have both been successful in restricting shrubland encroachment and maintaining grassland habitat, but questions remain about the potential positive effects of management on grassland bird communities.

Lakehurst NAES in central New Jersey presents a unique opportunity to examine avian use of military airfield habitats under different management scenarios. John Joyce, Cultural and Natural Resources



Site Map of Lakehurst NAES

Site Profile: Lakehurst NAES (cont'd)

Manager at Lakehurst, has enhanced habitats on the station through a variety of techniques since 1993. These have included mowing, burning, and targeted shrub removal, with the primary goal of restoring and enhancing habitat for grassland-dependent species. Sites within the burn management schedule are divided into quadrants, each on a four-year rotation, and most sites undergo a winter mow prior to the breeding season. Examples of early successional Watch List species breeding on Lakehurst include Grasshopper Sparrow (also listed as "threatened" in NJ) and Prairie Warbler. The base also houses the largest known breeding population of Upland Sandpipers in New Jersey.

Systematic breeding bird surveys have been performed on Lakehurst NAES annually since 1999, using standard point-count methods. The work has been conducted through a cooperative agreement with National Biodiversity Parks, Inc., and entails the completion of several surveys per breeding season. John Joyce also has a strong working relationship with New Jersey Audubon Society (NJAS), which conducted a fine-scale habitat survey at all of the grassland avian sample points in 2006 and a preliminary analysis of the grassland bird monitoring data. Findings thus far have shown that some species respond positively to prescribed burning, including Upland Sandpiper and Eastern Meadowlark. However, there appears to be a lag effect, indicating that increased use of burned sites primarily occurs 2-3 years after the burn takes place. Several other bird-habitat relationships were also revealed, demonstrating species-specific responses to vegetation structure at the local scale.

Additional work is currently underway at Lakehurst NAES that will increase understanding of the dynamics of birds and airfield habitats and promote effective management of these habitats. Most notably, NJAS is conducting a Legacy Resource Management Program-funded project that will provide extensive information about bird distributions on regional airfields with differing management regimes. Intensive, year-long avian surveys are being conducted at Lakehurst NAES, Patuxent River Naval Air Station (PAX) and Westover Air Reserve Base (WARB) and will continue through summer 2009. Changes in species composition and distribution are being tracked throughout the annual cycle, along with grassland management activities employed on each base. The primary goal of the study is to establish relationships among problem (BASH risk) and

conservation concern species, grassland structure, and mow/burn history. Starting in spring 2009, the survey work on these three installations will be enhanced with productivity monitoring, in the form of nest searching, daily nest survival estimation, and associations of these parameters with grassland management. Eastern Meadowlark and Grasshopper Sparrow will serve as focal species for this component of the project. Lakehurst NAES additionally supports several species of landbirds during the migratory, overwintering, and breeding periods that are not necessarily dependent on grasslands. In fact, approximately 55% of the site (4,100 acres) is considered forested habitat. NJAS, funded through the Agricultural Outlease Program, supplemented the grassland bird survey work with



Grasshopper Sparrow (Ammodramus savannarum), one of the focal species on Lakehurst NAES, is listed as "threatened" in New Jersey and in need of "immediate management" in the region. Photo: Kevin Karlson

monthly forest bird surveys and quarterly nocturnal bird counts in 2006 and 2007. These inventories were designed to gather information on the temporal and spatial patterns of birds using forested areas of the installation throughout the annual cycle. Watch List species detected during these surveys included Prairie Warbler (breeding, migration) and Wood Thrush (migration). Several Species of Continental Importance also were recorded, including Red-bellied Woodpecker, Carolina Wren, Hooded Warbler, Pine Warbler, Chestnut-sided Warbler, and Eastern Towhee.

Ultimately, these and other research and monitoring efforts in the region will help expose the effects that grassland management can have on birds, so that airfield managers can make informed decisions for bird conservation and maximize airfield safety.

continued...

Site Profile: Lakehurst NAES (cont'd)

Targeted benefits from the proper management of vegetation proximal to airfields will include both reduction in risk of bird-aircraft collisions and habitat enhancement for grassland species of conservation concern. To this day, grasslands remain one of the most rapidly disappearing landcover types in the northeastern U.S., and the conservation role of military training areas and airfields in this changing landscape is sure to increase. Lakehurst NAES, PAX, and WARB resource managers, through conscious management strategies and cooperative research efforts coordinated by NJAS, are demonstrating how broad questions can be addressed at the regional scale to best inform future guidelines and practices on military airfields.

- Dr. Kimberly Peters
Director Research and Monitoring
New Jersey Audubon



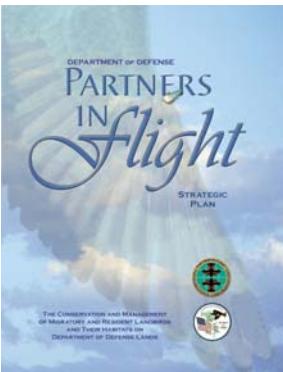
Prescribed burning on a grassland at Lakehurst NAES. Burning is often more cost-effective than mowing. Photo: John Joyce.

Partners in Flight Bird Conservation Plans

The *Flight Plan*, the Partners in Flight (PIF) blueprint for bird conservation planning, consists of four key elements that embody the essential elements of adaptive resource management. To facilitate the translation of continental population objectives into biologically sound, measurable regional and local population-based habitat targets, PIF adopted the *Five Elements Process*. This process shifts focus from identifying priority species to formulating quantitative estimates of how much habitat is needed, where, and by when (see www.partnersinflight.org/pubs/ts/01-FiveElements.pdf).

Through its participation in PIF, DoD actively manages its natural resources to support mission needs and flight safety goals, while pursuing a sound conservation ethic that strives to benefit bird species throughout the Americas. DoD's strategy focuses on inventory, on-the-ground management, education, and long-term monitoring to determine changes in migrant bird populations on DoD installations. The *Flight Plan* and *Five Elements Process* offer a framework for incorporating bird habitat management efforts into installation INRMPS.

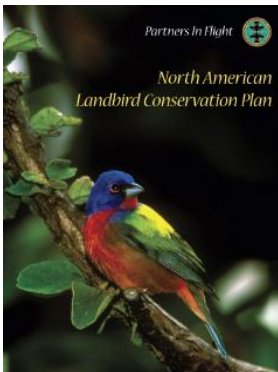
The DoD PIF program vision is to support the military's training and testing mission while being a vital and supportive partner in regional, national, and international bird conservation initiatives. Wherever possible, we strive to implement cooperative projects and programs on DoD lands to benefit the health and well being of birds and their habitats. We work hard to ensure that all Services have access to the land, sea, and air resources necessary to ensure national security, recognizing that sustainable use of these resources aids the military mission and also enhances the natural environment.



The *North American Landbird Conservation Plan*, published in January 2004, sets a new standard for broad-scale, multi-species conservation by providing an assessment of the status of 448 species of landbirds in the continental United States and Canada, exciting innovations in analysis, and a detailed vision for the future.

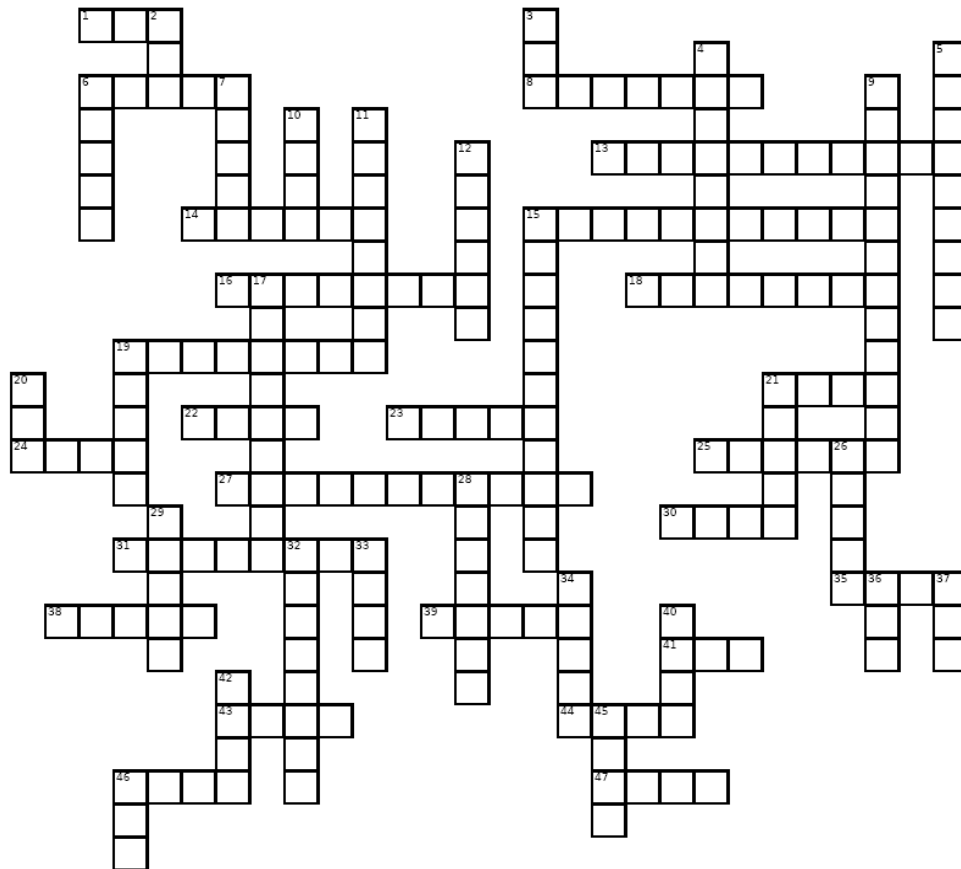
Perhaps the most important innovation in the Plan is the presentation of population size estimates for all 448 landbird species, from the most abundant (American Robin; 320,000,000), to species with much smaller populations, such as Golden-winged Warbler (210,000) and Louisiana Waterthrush (260,000). Another innovation is the creation of digital range maps for all landbirds. We can now portray and analyze a wealth of information about birds distribution at the continental level.

The baselines in the Plan recognize that the expansive losses and modifications of habitat since the European settlement of North America are historical realities that are not likely to be reversed to a significant extent at the continental level. It also recognizes that prior to 1966 and the start of the Breeding Bird Survey, there were no consistent data for most landbird species on which to base measurable population objectives.



As population estimates for the current plan continue to be refined, a tri-national (including Mexico) assessment of 893 species, or nearly 10% of the world's avifauna, is also being produced. With the addition of Mexico, additional species needs such as endemic species, the cage bird trade, and the critical value of wintering habitats will take on much more prominence.

Cross-Bird Puzzle



Thanks to Peter Boice for this edition's cross-bird puzzle!



See page 11 for answers.

Across

1. A patriotic color in many bird names
6. Navy and Monk may be found on DoD beaches
8. A high flyer or an autograph hound's need
13. It's magnificent! It has the longest wings relative to weight
14. A small, swift magician
15. Its resident populations get messy underfoot
16. A type of sin, or someone leading a flock
18. Our smallest Hummer is very fuel efficient
19. A poster species for nesting boxes
21. Some of their actions don't suit DoD
22. Integrative bird conservation legislation
23. Eagles nest here
24. Symbol of peace, or a Smithsonian researcher
25. The opposite of exhale
27. Has more songs than American Idol
30. They used to be international
31. This large introduced bird isn't really quiet
35. 15 years of protecting government resource managers
38. This red leaf is prominent in Canada
39. Many birds head here for the winter
41. Commonly used for bats
43. A patriotic color in many bird names
44. Decimated by a Dutch disease
46. Vulnerable to BASH or to AFC East opponents
47. Home to MCB Hawaii, Schofield Barracks, Hickam and Pearl Harbor

Down

2. Can be used to identify bird snarge
3. An important survey
4. Secretive royal marsh bird
5. Mostly delisted, but still protected
6. Endangered harbinger of a pending delivery
7. Extremely useful for viewing water birds
9. A major BASH hazard
10. Comes before an Act, or a bird
11. Our hottest bird
12. The most famous is #8
15. Linked to livestock worldwide
17. Curse for an Ancient Mariner
19. Artificial habitat for bluebirds and wood ducks
20. A group of whales
21. 25 years of working for DoD natural resources
26. If you have significant natural resources you have one
28. Farm-based night hunter
29. Laughing, herring and ring-billed
32. A living decoy
33. May be made of sticks and stones, or many other materials
34. A patriotic color in many bird names
36. It came before the chicken
37. DoD has spent more than \$70M on its recovery
40. From tiny acorns grow
42. An ACC mascot
45. Its song might drive you crazy
46. Blue, green, or Stellar

Army Mobilizes to Increase Burrowing Owl Habitat in Oregon

Not far from the area on the U.S. Army Umatilla Chemical Depot (UMCD) in Oregon where the deadly remains of chemical weapons are disposed, dozens of Burrowing Owls are living in old pipes and holes once dug by small mammals. Nationwide, the Burrowing Owl population is declining and is listed as a national "Bird of Conservation Concern." But on the Depot, protected by the same fences and heavily armed guards that ensure the safety of the hazardous chemicals, the owls have been growing and breeding since 1941. Other wildlife also have made a home in this shrub-steppe habitat, and the Army has partnered with various agencies to protect or develop habitat for the Burrowing Owl and other species, such as the pronghorn.



Don Gillis, natural resources manager at Umatilla Army Depot, builds artificial Burrowing Owl burrows using 55-gal. plastic barrels and common household materials. Photo: US Army.

The Army decided to become more actively involved in protecting Burrowing Owls in 2007, when they began planning for migratory bird protection. "We approached the US Fish and Wildlife Service [FWS] with the idea of assembling a team to build artificial burrows—we call them owl condos," said Don Gillis, UMCD natural resource manager. FWS biologists, UMCD Environmental staff, and volunteers developed a plan to construct new owl burrows from modern materials, and set them up on the Depot.

The burrows are built in the Depot Environmental Division shop using plastic barrels and buckets, flexible drainage piping, and other hardware, based on a design from Hanford's Volpentest HAMMER Training and Education Center in Richland, Washington. The design is basically a 55-gallon plastic barrel with a long, narrow drainage pipe entrance that prevents coyotes from preying on the owls. The bottom of the barrel is cut off so that the owls walk only on dirt, and a hole cut from the top allows biologists to count eggs and maintain the burrow. In the future, low-light video cameras may be installed for consistent monitoring.

Once the burrows are built, FWS biologists select specific sites for artificial burrows, take the global positioning system (GPS) coordinates, and work with volunteers from both the on- and off-post



Installation of owl condo. Photo: US Army

community to dig out holes and construct the condos. The access hole in the top is covered by a five-gallon bucket filled with dirt that protects the owls from predators and the 100 degree heat of summer. The entire condo, save the flexpipe entrance, is mounded over with dirt and made to look natural.

The construction and digging is hard work. The volun-

teers will be commemorated for their hard work by having one of the burrows named after each of them. All told, 18 burrows were installed from May to June 2008. Within a few weeks, activity was seen near 14, and some have been adopted as homes.

Lt. Col. Bob Stein, Commander of the Depot, underscores the Army's commitment to the sustainability of natural resources in order to achieve mission success: "Today's Army mission includes environmental protection in many forms. We protect the depot environment by not only keeping chemical agent safely contained, but by working with federal and state agencies to protect wildlife." Stein emphasized, "This is a tremendous partnership between the Army and our neighbors."



The first Burrowing Owl (nicknamed "Buffy") moved into an artificial burrow within a day. Photo: US Army.

- Editor's note: This article was summarized by Kyra Wiens (Booz Allen Hamilton) from a 10-21-08 Press Release. For additional information, please contact Bruce Henrickson, Public Affairs Office, US Army Umatilla Chemical Depot.

DoD PIF Reps Meet (cont'd)

Research: Identify gaps in knowledge and investigate research needs relevant to mission support requirements and conservation of priority birds.

Information and Education: Continue to develop and implement education and outreach information and materials to promote bird conservation and the DoD PIF Program.

Through the hard work of DoD's PIF reps, natural resource managers, and many partners and stakeholders, we will continue to sustain and enhance resident and migratory birds and their habitats on DoD lands and off. The updated Plan, expected by summer 2009, will help guide these efforts.



American Redstart. FWS Photo.

- Alison Dalsimer and Kyra Wiens, Booz Allen Hamilton

Issue: Global Climate Change

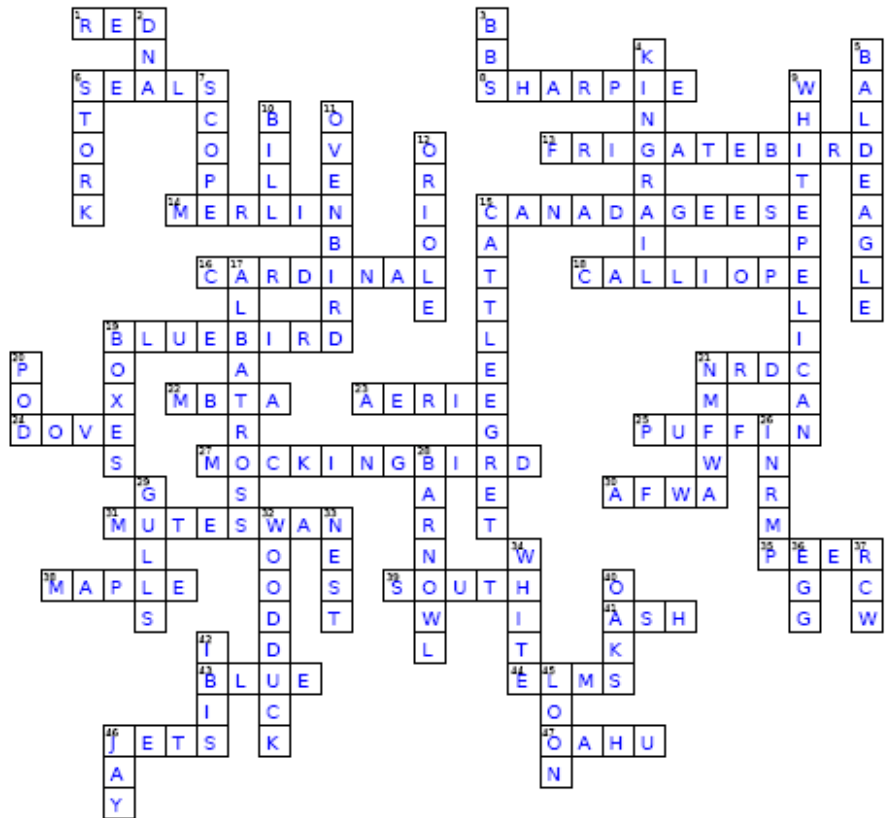
Global climate change presents a serious national security threat which could impact Americans at home, impact United States military operations and heighten global tensions, according to a new study released by a blue-ribbon panel of retired admirals and generals from all branches of the armed services.

The study, *National Security and the Threat of Climate Change*, explores ways projected climate change is a **threat multiplier** in already fragile regions, exacerbating conditions that lead to failed states – the breeding grounds for extremism and terrorism. (Excerpt from: <http://securityandclimate.cna.org>.)

Similarly, a 3-5 November 2008 conference, *The Role Of The Military In Climate Change*, which included civilian and military officials from numerous ministries of defense from European Union states, India, Brazil, and the U.S., concluded that the military is crucial in global 'green' efforts. "Military cooperation to protect climate and stratospheric ozone layer is a centerpiece of environmental security," said Dr. S.O. Andersen, EPA liaison to the DoD in GCC issues. (Source: www.egovmonitor.com/node/21794.)

For more comprehensive information, get a free download of *Global Climate Change: National Security Implications*, edited by Dr. Carolyn Pumphrey, at www.strategicstudiesinstitute.army.mil/pubs/display.cfm?pubID=862

Answers to this issue's Cross-Bird Puzzle!



Please let us know if you enjoyed this feature. If not, what other feature(s) might you like? If so, let us know if you would like to contribute a puzzle.

Field Notes

DoD's bird conservation successes are perhaps the most visible and striking features of DoD's natural resources conservation program. Yet, they too go unnoticed by many. The approach I use to convey DoD's important role in bird conservation can vary depending on the particular audience, the setting, how much time I have, and maybe even on the last bird I've seen.

But in the end, it's hard to match personal experience. How better to reflect the dedicated work of the many individuals and teams working to make all the stories I've recounted a reality on military lands than to personally experience them?

My work involves far more desk time than I'd like, so perhaps I get more excited than some by much of what I see when I do get to visit some of the military's natural wonders. Two life birds that I had the privilege to see within the past seven months illustrate the sheer beauty and wonder of what Defense has protected on its lands.

Avon Park Air Force Range is located on Florida's unique central ridge, the Lake Wales Ridge. An early morning drive through twenty miles of low-lying fog and open range brought me to the Range's front gate. What was a routine but necessary security check became the highlight of my visit. Imagine my pleasant surprise to see that the entrance was being guarded not only by the expected human personnel, but in the near distance by a pair of Sandhill Cranes. I pulled into the parking area - I was early for my meeting - and the cranes fully cooperated while I scurried for first my binoculars, and then my camera. What a glorious way to start the day!

Fast forward five months and five time zones to Marine Corps Base Hawaii, located on Kaneohe Bay on the north side of the

island of Oahu. No surprise this time - I'm joined by several Marines and about three dozen attendees of a Legacy-sponsored threatened and endangered species workshop for a very special field trip. We are here to see the Marines' well-known Red-footed Booby colony and to hear about the management practices they are undertaking to protect the birds from wildfires and to enhance the birds' habitat.



Florida Scrub-Jay. Photo: Rich Fischer.

The birds do not disappoint. There appear to be thousands of them. Many are quietly sitting on their nests - in "trees" that would hardly merit the name back east. But that means these large birds are literally within a few feet - no close up lenses needed here! Some are immature birds, still displaying an overbearingly cute fuzzy appearance. Other birds glide several hundred feet above our heads. All is as serene as these noisy birds can manage - huge white puffballs along a protected hillside overlooking the Pacific - and the base's impact area.

As I leave I mentally note what the boobies are telling me - that sometimes our bird conservation efforts aren't that quiet after all, and perhaps I should shout our message - and theirs - to all who would listen.

- Guest Author: L. Peter Boice, DoD Conservation Team Leader



CONTRIBUTING TO THE DoD PIF NEWSLETTER IS EASY!

*Want to highlight bird conservation efforts on your installation?
Have a great bird image you just have to share?
Send your ideas and images to Chris or Alison.*



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