



Volume XX

Number 2

June 2002

**Inside This Issue**

Page

<b><i>The Wild Side</i></b>	<b>1</b>
<b><i>Herpetology Work Grp</i></b>	<b>3</b>
<b><i>By-Laws Amended Fort Riley Env Awards</i></b>	<b>4</b>
<b><i>Where the Money Goes</i></b>	<b>5</b>
<b><i>BOD Meeting Minutes</i></b>	<b>6</b>
<b><i>NMFWA at TWS, 2002</i></b>	<b>8</b>
<b><i>NMFWA Awards Report</i></b>	<b>9</b>
<b><i>Photo Cont. Winners Am. Fisheries Conf. Invasive Sp WG Rpt</i></b>	<b>11</b>
<b><i>Tech Presentations in Dallas</i></b>	<b>12</b>
<b><i>Call for Papers</i></b>	<b>15</b>
<b><i>Indigo Snakes at Fort Stewart</i></b>	<b>16</b>
<b><i>Forestry/Wildlife at Dare Range</i></b>	<b>18</b>

**THE WILD SIDE**

**Jim Beemer – NMFWA President**  
(ravenwindrider@earthlink.net)

When I first realized that I was now responsible for writing “The Wild Side” column for the next three issues of THE FAWN, I was tempted to change the column name to “The Far Side”. For those Association members that have known me awhile, this would not have been surprising, and some would have even said it would be fitting. But, I realize, too, that traditions and customs are beneficial for keeping the Association on an even keel. So, “The Wild Side” remains.

Another tradition is that the incoming President’s first “Wild Side” column spends a fair amount of space on the just-completed Annual Training Conference. And with good reason! The NMFWA Technical Sessions continue to produce exceptional papers/presentations and an outstanding training opportunity.

I hope everyone who attended the 2002 NMFWA Conference & Training Sessions in Dallas had an enjoyable time and got a lot out of it.

A BIG congratulation goes to Chester Martin for this. Chester fretted, worried and agonized, but in the end, he continued the tradition of putting together an excellent program, much like the others I’ve attended since my first one, ten years ago. Kudos also go to Dennis Herbert and his staff from Fort Hood for their efforts as the Host Committee that contributed towards making the conference the success it was. Dennis and staff set up and manned the audio-visual equipment for the presentations, had hundreds of door prizes, and made the arrangements for our banquet (an excellent site – members who did not attend missed seeing many members sitting atop a big Texas longhorn steer. See the photos on the NMFWA website). I cannot find enough words to praise their efforts.

When I attended my first NMFWA Conference & Training Sessions in Charlotte, NC, I had only been working at West Point for two and a half months. I was still learning how

*continued..... page 2*

Now is the time to submit your articles on events or field studies taking place on your installation.

See **FAWN** deadlines on page 2

### *The Wild Side — continued*

to effectively function as a fish & wildlife biologist on a military installation. The members attending that conference back in 1992 were more than willing to share their knowledge with me, something that continues to this day. Even those members who have retired or moved on to another position continue to stay in touch and provide useful insights and helpful suggestions.

That is a tradition that rests at the heart of what NMFWA is. It is an association of natural resources professionals dedicated to sound natural resources management so that the military trainers can continue to provide realistic training for our soldiers, sailors and airmen & test the new weapons systems and technologies that our fighting men and women need.

It is now easier than ever for fellow NMFWA members to share with one another the knowledge and skills each one of us possesses. The NMFWA website with its electronic bulletin board can reach members that you may not have a phone number or e-address for. The established working groups routinely distribute the latest developments and scientific findings. The Herpetology Working Group has a database established on the NMFWA website of herp-related projects from over 40 installations (which continues to grow) so that members won't have to re-invent the wheel. The Invasive Species Working Group is developing a similar database and hopes to make it available shortly. And, I look forward to what our newest working group – the NMFWA Bat Working Group – will accomplish.

Working groups are easy to set up. They can quickly network professionals interested in whatever topic the working group addresses. And, working groups do not require a major investment of time and energy to make them work. Guidelines for setting up a NMFWA working group are available on the NMFWA website.

Before closing, I would just like to say that I am deeply honored to have been chosen to lead this prestigious organization in the year ahead. There

are several issues on the immediate horizon that could impact natural resources programs on Defense lands. I will do my best to insure that this Association's interests are properly represented in the appropriate forums.

Members should feel free to contact me regarding any issue or problem that the Association may be able to help you with. My home e-address is [ravenwindrider@earthlink.net](mailto:ravenwindrider@earthlink.net) and I check it regularly. You can also telephone me at work or at home. Feel free to contact the other Board members as well. Their contact info is found on the back of THE FAWN and on the NMFWA web site.



### **DEADLINES FOR SUBMITTING ARTICLES TO EDITOR FOR UPCOMING FAWN EDITIONS:**

**16 SEPTEMBER for OCTOBER  
2002**

**16 DECEMBER for JANUARY  
2003**

Articles on installation activities may be submitted through your respective Regional Directors (Scott Smith and Carl Petrick—Eastern Region; Coralie Cobb and Hildy Reiser—Western Region) or directly to me.

Electronic files should preferably be in MS Word®, Times New Roman font. One or two clear pictures (JPG) may be beneficial (more may be negotiated) and will be used, barring space constraints.

If you have questions about submitting articles, please call me at (601) 634-4862.

Mike Passmore  
([michael.f.passmore@erdc.usace.army.mil](mailto:michael.f.passmore@erdc.usace.army.mil))

## Herpetology Working Group 2001 Report

The Herpetology Working Group (HWG) has accomplished quite a bit this year in promoting the management and conservation of reptiles and amphibians (herps). As with our membership, efforts this past year have reached beyond DOD boundaries. Highlights are as follows:

1. The most significant accomplishment this year has been the completion of HWG's guidelines on the management and conservation of reptiles and amphibians on military installations. A tremendous number of HWG members contributed to the final product. The guidelines are now available on the NMFWA HWG website for viewing. We anticipate that DOD will be forwarded our recommended guidelines for review and consideration. I am not aware of the status of the guidelines.

2. HWG member Tessa Martin-Bashore has converted the herp project Excel spreadsheet to an Access database. Now individuals can query project information and more easily manipulate data. This database provides NMFWA members and non-members a source of information on a variety of herp management topics. The database is also available on the NMFWA HWG website for viewing.

3. HWG members Tessa Martin-Bashore and Terry Bashore put together a slide presentation on '**FIELD TECHNIQUES FOR SURGICALLY IMPLANTING RADIO TRANSMITTERS IN VENOMOUS SNAKES.**' The presentation is available on the NMFWA HWG website as a viewable document.

4. A number of HWG members attended a PARC Workshop on Habitat Management Guidelines for Conservation of Amphibians and Reptiles. All attending members have provided input into the draft guidelines that are being developed by PARC. At present, the Midwest



PARC region has completed their guidelines and will soon have them available for viewing on their website.

5. The HWG met in Washington, D.C. and discussed the current year's order of business. Primary focus was on completing the herp conservation guidelines, but other relevant issues and future activities were discussed. The meeting was attended by 21 people who all actively participated. HWG also gained a number of new members from this meeting.

6. The HWG has maintained an active dialogue over e-mail addressing technical, statutory, regulatory and educational topics, thus helping to maintain current knowledge of herpetological issues.

7. HWG member John Lamb has put together a mini herp workshop for the HWG meeting in Dallas. Five HWG members will give presentations on installation herp projects or other related herp issues. A regular HWG business meeting will be held after the presentations. As always, Board members are welcome to attend.

Chair Election results for the HWG chair and recording secretary for 2002 will be announced at the HWG annual meeting to be held April 2<sup>nd</sup> in Dallas. I have served as Chair for the maximum period of two years, so there will be a new Chair. My time as Chair has been extremely enjoyable and I'd like to thank all of you for your support and encouragement of the HWG and its goals.

Jay M. Rubinoff (RubinoffJ@osc.army.mil)

# NMFWA By-Laws Amendments

The results of the two NMFWA by-laws amendment proposals voted on at the 2002 Annual Business Meeting in Dallas are as follows:

Proposal # 1, which would - (1) remove the Poster Committee and replace with a standing Outreach Committee; (2) Stagger the terms of the Secretary and Treasurer so that only one would be elected in any one year; and (3) changes two sections to reflect the electronic means that can now be employed to conduct NMFWA business, - was passed unanimously by the voting membership present without any additional discussion. Forty-six votes were cast in favor.

Proposal # 2, which would grant voting membership to Department of Interior employees, state agency employees and university personnel who are directly employed in the management of natural resources on military lands, was defeated by a roughly 3-1 margin. One absentee ballot was cast on this issue in addition to the 46 voting members present at the meeting. The vote was 12 in favor, 35 against with no abstentions. A two-thirds majority is needed to approve a by-laws amendment.

There was considerable discussion on Proposal # 2, both in favor of and in opposition to the proposal. I was pleased to see so many members willing to voice their views on this important matter.

The amended by-laws are now available on the NMFWA website.

James A. Beemer, President  
ravenwindrider@earthlink.net



## Fort Riley Wins Environmental Awards

Fort Riley’s Directorate of Environment and Safety (DES) has been recognized by two national organizations for their conservation and recycling efforts. Partners in Flight recognizes organizations that protect migratory birds and their habitats. Waste Management, Incorporated acknowledges communities that promote America Recycles Day.

DES was awarded the Partners in Flight Group Award for Sound Land Stewardship. DES personnel are responsible for maintaining the Fort Riley training areas for military training and for ecosystem integrity. They accomplish both these missions through conservation of the tall grass prairie by prescribed burning, closely regulated hay harvesting, and invasive tree control. These practices lead to healthy bird populations. Many bird species use Fort Riley while breeding, migrating, or wintering, and are surveyed by DES personnel. The DES individuals involved in these ongoing efforts are Herb Abel, conservation division chief, Alan Hynek, fish and wildlife administrator, Jeff Keating and Gibran Suleiman, threatened and endangered species biologists, John Barbur and Monte Metzger, agronomists, Mark Neely, forester, Mark Schreefer, forestry technician and Jerold Spohn, range technician.

Jeff Keating, threatened and endangered species biologist at the DES, said, “Birds comprise the majority of vertebrate species that occur in the habitats on Fort Riley. Managing these habitats to provide quality areas for the diverse bird species that occur also provides quality habitat for the other types of wildlife native to this region.” The largest habitat type on Fort Riley is tall grass prairie, which is the habitat type that has suffered the largest loss of acreage in North America according to Keating. Thus, an emphasis on Fort Riley has been to coordinate prairie management initiatives, such as prescribed burning and agricultural leases, in such a manner so that the needs of all breeding grassland birds within the Flint Hills area are met, in both the short- and long-terms, in coordination with the military mission.

The DES was also awarded the Waste Management, Inc., Recycle America Award for their America Recycles Day (ARD) activities. Government officials, elementary students, military and civilian personnel, as well as members of the surrounding communities, were invited by DES to participate in events designed to promote the benefits of recycling and buying recycled-content products. The DES sponsored 14 separate events, including the grand opening of a new recycle collection point, a "Buy Green" product identification initiative for consumers at the Fort Riley Commissary and the Post Exchange and an elementary school poster contest. The DES focused much of its ARD efforts close to home, but Fort Riley's activities extended beyond the installation's boundaries to surrounding communities. Through the influence and support of Fort Riley's DES, Junction City and Kansas State University held ARD events in 2001. The Recycle America Award came with a \$3,000 check, which will be used to support Fort Riley's Troop Incentive Program, through which units on the installation are given monetary awards for recycling.

Single Day Fee for invited Presenters	<u>\$0</u>
(this excludes an invitation to the Banquet and the Show and Tell Session)	
Show and Tell for Non-DoD Exhibitors	\$200.00
Banquet Fee for Non-Registrants -	\$40.00

The \$250 standard registration fee pays for the entrance to the NMFVA Annual Training Session as well as the North American Wildlife and Resources Conference, the NMFVA Awards Banquet (NOT THE WMI Banquet), the NMFVA Show and Tell Session, as well as other NMFVA Training Session costs and annual costs. Of the \$250, \$115 is provided to the Wildlife Management Institute (WMI) for their support in arranging the meeting location and paying for the rooms and hotel coordination. The cost for the Awards Banquet, including the food, hotel support, and transportation if needed, is \$40. The Show and Tell Reception is \$20 which includes food, set up, a bartender or two, as well as all supplies necessary for participants. A portion of the fees also pays for fees for using credit cards (2-3% of the cost or \$5.00 - \$7.50), programs, and the rental/use of any equipment to support the Training Session. In addition, our Annual Training Session fees allow for NMFVA activities throughout the year including production and distribution of the FAWN, plaques and awards distributed, website expenses, etc. For example, expenses during 2001 included:

2001 Conference	\$ 22,192.04
2002 Conference	\$ 3,790.47
Conference pins for 02 & 03	\$ 758.84
Awards Committee	\$ 504.18
Law Enforcement Committee	\$ 1,750.00
Nominations Committee	\$ 400.94
Poster Committee	\$ 85.95
FAWN	\$ 3,692.77
Postage and delivery	\$ 87.90
Supplies	\$ 111.06
TWS Sponsorship Fee	\$ 1,000.00
Website	\$ 1,495.85
Bank Service Charge	\$ 70.20

**WHERE DOES YOUR REGISTRATION MONEY GO?**

This is a question I'm often asked, especially at the annual training sessions. Hopefully, this will provide that explanation; if not, feel free to contact me.

Current NMFVA Training Session registration fees are as follows:

Standard fee (banquet included)	\$250.00
Students and Retired Persons (banquet included)	\$150.00
Single Day Fee (banquet not included)	\$75.00
(DOES include admission to the Show and Tell Session)	

Tammy Conkle (619-545-3703)  
(conkle, tamara@ni.cnrsw.navy.mil)



## NMFWA Board of Directors Meeting April 5, 2002

**Attendees:** Jim Beemer, Julie Eliason, Jim Copeland, Mike Passmore, Rhys Evans, Hildy Reiser, Jim Bailey, Chester Martin, Scott Smith, Coralie Cobb, Tammy Conkle, Bob Wardwell, Don Pitts, Junior Kerns, Steve Reidsma, Wanda Deal, Mark Hagan, Junior Kerns, Thomas Wray, Rafael Corral, Jim Hessil, Kim Mello, Terry Bashore, Tessa Bashore, Joe Hovis.

The Board of Directors (BOD) Meeting of the National Military Fish and Wildlife Association (NMFWA) was held in the Bryan Beeman Room of the Hyatt Regency Reunion Center in Dallas, Texas, on April 5, 2002. President Jim Beemer called the meeting to order at 1337h.

Past President Don Pitts made a motion and Jim Bailey seconded the motion to accept the Treasurer's Report that had been given by Ms. Tammy Conkle at the General Business Meeting. The motion passed.

Mr. Bob Wardwell gave the Awards Committee Report. Dr. Thomas Wray, Mr. Rich Clewell, Mr. Dan Gonnering, Mr. Jim Hessil, and Mr. Wardwell were committee members to decide on the best paper presented at the conference. The best paper award was given to Mr. (?) Stuart Cannon for his paper titled "Overview of Encroachment Issues". Mr. Wardwell will send the results to Mr. Rhys Evans for the NMFWA website. Next year, the award winner will be announced at the banquet. Mr. Evans said it would be preferable to have photos of the award winners for the website.

President-elect Chester Martin gave a report on the draft legislation the DoD has prepared (Sustainable Defense Readiness and Environmental Protection Act). The BOD discussed that they had some initial concerns about the contents of the draft and that accurate information is needed from the training sites to determine the actual impacts that environmental protection has on training readiness. Mr. Martin suggested that the Committee should start developing information on how effective we

have been in making training and resource protection compatible.

The BOD discussed the structure of next year's NMFWA conference, which will be held 26-30 March 2003. Most people liked the structure of this year's conference. Ms. Conkle suggested that a workshop be held on the Monday before the technical sessions, since not many people signed up for the field trip after the conclusion of the technical sessions. She suggested to end the conference with the General Business Meeting. Ms. Conkle said that if technical sessions are scheduled immediately before the general Business Meeting, more people will attend the meeting. Dr. Jim Bailey said that the Wildlife Management institute (WMI) will move the sessions up by one day next year. The NMFWA Awards Banquet will probably be in conflict with the WMI banquet next year, but if we coordinate with WMI early enough, we may be able to avoid this scheduling conflict. Mr. Wardwell reminded the BOD that WMI requested we not schedule anything during the WMI Plenary Session.

Dr. Bailey said he has received 20 different proposed session topics for the NMFWA technical sessions for next year, six of which are already committed. The BOD discussed the pros and cons of having two concurrent technical sessions next year. Dr. Hildy Reiser suggested that if we have concurrent sessions, one session could include basic information for new resource managers, while the other session include more advanced information for long-term resource managers. Mr. Martin suggested that we implement a "Call for Papers" in June, which would give the presenters ample opportunity to submit their abstracts on time. We will request that WMI print the entire NMFWA program in the WMI brochure next year, since our sessions will run concurrent with theirs. Ms. Conkle reminded the BOD that the Association could save a lot of money by bringing audio-visual equipment from the installations. Dr.

Bailey will make up a draft program and submit to the BOD.

Dr. Thomas Wray stated that he needs suggestions for session topics for the WMI Conference by 19 April 02.

President Beemer listed the new committee chairs, which are as follows:

- Award Committee- Jim Hessel
- Audit Committee - Rafael Corral
- Government Affairs Committee - Jim Copeland
- Program Committee - Jim Bailey
- Outreach Committee - Rhys Evans
- Nominations Committee - Don Pitts
- Archives Committee - Tom Warren
- Law Enforcement Committee - Michael Dunning
- Membership Committee - Michael Passmore
- Ad Hoc* Reserve Account Committee - Scott Smith
- WMI Committee - Thomas Wray
- 2003 Host Committee - vacant

The BOD discussed recruiting members to run for office. Ms. Conkle said that she thinks it is important to explain the responsibilities and tasks of the office to potential candidates before asking them to run for office.

The BOD discussed sending the NMFWA poster to the DOD natural resources conference in Tucson, Arizona. The television and videos will not be sent. Ms. Conkle said that Ms. Alison Dalsimer requested a copy of the conference registration list to send information about the DOD conference via email. Ms. Conkle made a motion for the BOD to approve providing an email list to Alison for this purpose. Mr. Evans seconded the motion and the motion carried unanimously. Dr. Passmore will send Ms. Dalsimer the list of email addresses.

The *Ad Hoc* Reserve Account Committee will research the possibility of setting up the Reserve Fund as a charitable organization. If the conversion were made, the fund would have its own bylaws. Mr. Pitts made a motion that the

Reserve Account Committee confer with Mr. Dan Meyer from PEER to investigate setting up the Reserve Account as a 501 C3 fund. Dr. Bailey seconded the motion. The motion was later amended to replace Mr. Meyer with legal council. Dr. Bailey seconded the amended motion. The motion carried unanimously.

President Beemer suggested the BOD consider shifting some of their activities to home and use their home email accounts to conduct NMFWA business rather than using their email addresses at work.

The BOD discussed revisions to the BOD handbook. Ms. Conkle made many revisions and suggested that Dr. Passmore review it. There was discussion about where the FAWN past issues should be stored. The BOD handbook states that both the Archives Committee Chair and the Secretary/Treasurer store them. Ms. Conkle suggested that the mission statement, policies, and BOD responsibilities be included in the BOD handbook and that it be distributed to members that would like to get more involved with the Association. Mr. Evans nominated Ms. Conkle to be the Chair for an Ad Hoc Committee to Change the By-laws. Mr. Evans and President Beemer both volunteered to assist.

The BOD discussed distribution of the BOD list. In addition to the organizations that the list was sent to last year, the following organizations were added to the distribution list: the Izaak Walton League of America, Theodore Roosevelt Conservation Alliance, National Rifle Association, Conservation Program, and Ducks Unlimited.

Mr. Martin made a motion that the charter of the NMFWA Bat Working Group be accepted by the BOD as revised by the recommendations of the Bat Working Group members. Mr. Evans seconded the motion. Discussion followed that the BOD would like to see the revised charter on the NMFWA website before voting. The motion failed with 3 yes votes, 5 no votes, and 2 abstentions. A new motion will be made after the charter is published on the website.

*continued..... page 8*

***Minutes — continued***

President Beemer brought up the topic of including a policy of email voting in the BOD handbook. Previously, no records of email votes were kept. Email voting can be conducted after the annual meeting until one week before next BOD meeting. The BOD discussed several criteria for email voting. Ms. Conkle reminded the BOD to get a statement from the Treasurer that funds are available to support a motion, before making a motion that will involve expenditure of funds. Ms. Eliason asked for voting guidelines so that they can be recorded and filed more easily. Mr. Evans volunteered to draft the email voting guidelines, which will be submitted to the BOD for acceptance.

Dr. Passmore made a motion to rescind the approved August 2001 Board Motion. Mr. Copeland seconded. Discussion followed. Dr. Reiser made a motion to table this motion until such time that the Board can determine how far results of the motion had already been disseminated. Seconded by Mr. Pitts. President Beemer agreed to find out and report back to the Board. President Beemer called the vote. Motion to table passed 10-1.

Ms. Eliason said that the Encyclopedia of Associations sent her a letter saying that the NMFWA Association was in their encyclopedia and they wanted us to update our information. The BOD decided that Ms. Eliason should research the Encyclopedia of Associations before updating our information. Ms. Eliason also asked for copies of any correspondence sent out by the BOD in the previous year so that she can file them.

Dr. Bailey suggested that the FAWN be sent electronically and that hard copies be sent only if members request it. Dr. Passmore said he would like to cut back FAWN costs by 50% and has other ideas to cut costs. Dr. Passmore requested assistance on the Newsletter Committee. Mr. Pitts volunteered.

Mr. Scott Smith brought up the subject of providing NMFWA T-shirts as part of the registration fee. Ms. Conkle explained how the registration fees are distributed. The BOD discussed how we could cut costs on the annual conference, including recycling badges, and selling hats and shirts. There was then discussion about whether or not it was appropriate to charge members to attend the Show and Tell Session and whether food should be provided. Ms. Conkle said that the Silent Auction used to pay for the Show and Tell session, but now the Silent Auction proceeds go into the Reserve Account. Ms. Conkle requested that if someone is supposed to get special exemption from registration costs to let her know so she does not charge them. The discussion was tabled for lack of time.

Dr. Bailey moved that we adjourn and Ms Cobb seconded the motion. The meeting adjourned at 1620h.

Julie Eliason (julie.eliason@ca.ngb.army.mil)

**NMFWA at TWS in Bismarck,  
ND, September 2002**

The National Military Fish & Wildlife Association will conduct a general membership informational meeting in conjunction with The Wildlife Society's Annual Conference in Bismarck, ND this September (23-28). The NMFWA meeting will be on Wednesday, September 25 from 7:00 - 8:30 PM in the Cannonball Room of the Radisson Inn - Bismarck.

All NMFWA members attending the TWS meeting are welcome to sit in and hear what the Board of Directors, the Committees and Working Groups have been doing since Dallas, plus ask questions and provide input on what the members would like to see the Association accomplish.

Questions may be directed to me at ravenwindrider@earthlink.net.

James Beemer, President



**Awards Committee  
Report  
Bob Wardwell, Chair  
(rwardwell@arl.army.mil)**

The following awards were presented at the 2002 annual meeting in Dallas:

**Tessa E. Martin-Bashore  
Special Achievement Award for  
Volunteer-Education**

As an entirely volunteer effort, Tessa designed and implemented the data base for the NMFWA Herp Working Group. The Herpetological project data initiative's purpose is to provide one single repository for bibliographical information of military herpetological projects, past and present. It acts to permanently document gray literature (which often gets filed and forgotten), broadcasts that literature's existence, provides contact information, and encourages scientific information exchange between resource managers facing similar issues.

The data base will promote enhanced knowledge and technical capabilities of Department of Defense (DoD) natural resources professionals in the area of herptile species management in support of the DoD mission. It will increase awareness and appreciation within DOD of herptile species management issues and decision-making processes. The data base (at the time of this writing) includes over 112 DoD projects from all service branches, data on species, Project Titles, Key Species Common Name(s), Scientific Name(s), Product Descriptions, Project Dates, Points of Contact, Contractors, Cooperators, and Funding Agency. The project data base is a "living data base" and is updated as new DoD projects are completed.

**Dr. Rafael D. Corral  
Special Achievement Award for  
Professional-Management**

Rafael is a botanist who manages the Fort Bliss Endangered Species Program and the Pest Management Program at Fort Bliss. He is a

professional environmental steward who has been supporting the Fort Bliss mission for the past nine years. His professionalism and recognized expertise facilitate compliance with Army, DoD, and federal regulations and laws, ensuring that the military mission will continue. His actions also contribute positively to the quality of life on the post and in the community.

Dr. Corral conducts outreach to area schools by guiding field trips and tours of the Fort Bliss herbarium, as well as giving lectures. Dr. Corral is featured as a positive role model in *At Home in the Desert*, part of the *Science at Work* series published by Curriculum Associates®, Inc., for elementary school students; the book provides children with knowledge about environmental stewardship and careers in environmental fields. He has also been proactive in Global Learning and Observations to Benefit the Environment (GLOBE), an international educational program that aims at exposing students and teachers from grade school through high school to science and technology in the field and classroom.

Dr. Corral's command of Spanish is also an asset to Fort Bliss. He has translated educational material related to the Fort Bliss Programmatic Mission and Master Plan Environmental Impact Statement, allowing Fort Bliss to increase its audience and further comply with regulations concerning public involvement.

**Dawn Lovett  
Special Achievement Award for  
Professional-Technical**

Dawn Lovett, in her role as the Administrative Secretary in the ALC Division of Public Works, has rendered invaluable support and assistance to the ALC natural resources program manager over the past five (5) years.

In addition to her regular duties, she has served as an adjunct Wildlife Conservation Officer. In this capacity, she devised a novel hunting and fishing fee collection system for the consumptive recreational program at the Blossom Point Research Facility. Ms Lovett voluntarily participated as a "role player" in the NMFWA Law Enforcement Training Course held at Blossom Point in 1998.

*continued ...page 10*

**Awards — *continued***

Beginning in 2000, she helped to develop and currently assists in the implementation of a program to collect and analyze water quality samples collected from two tributaries of the Chesapeake Bay.

Her skill in editorial and administrative procedures was exemplified by her comments and assistance in the finalization of the five-year revision of the ALC Integrated Natural Resources Management Plan and the accompanying Environmental Assessment.

**Julie Jeter, Jim McDermott, Kevin Porteck,  
Jean Bickford  
Special Achievement Award for  
Professional-Management**

The 2001 Air Force-hosted Department of Defense/Society of American Foresters meeting was the most successful in the history of such meetings. Kevin Porteck, Julie Jeter, Jim McDermott, and Jean Bickford were responsible, among others, for the success of this particular conference.

In the press of our everyday duties, DoD natural resources managers seldom have time to attend to all the details and arrange for the amenities that make a conference interesting and successful such as web site set-up and announcement, registration, hotel rooms, catered meals, meeting rooms, presentations, audio visuals, tours, tour guides, tour stops, buses. Instead of taking the easy route and getting a room in downtown Denver, Julie, with the assistance of Jim McDermott and Jean Bickford, and under the direction of Kevin Porteck, arranged three days set in the beauty of the Air Force Academy with tours through the Front Range of Colorado and thought-provoking field discussions on the issues of proactive endangered species management, forest health, fire ecology, ecosystem restoration, and forest history.

The meetings took place from September 10-12, in the midst of the tragedy of September 11<sup>th</sup>. Just as the conference was ready to start that morning, with honor guard and Commanding General on hand, the attendees were greeted by a scene of

horror unfolding on that huge screen in the main meeting room. They could easily have been distracted and missed the purpose for the conference. All of their hard work could have easily been destroyed by the events perpetrated by a handful of terrorists thousands of miles away. Yet AF forester Kevin Porteck turned off the television and brought us all back to our duty to the Department of Defense and to our installations by saying “Now is the time to remember who we are and what we stand for.” In the aftermath of the terrorist attack, speakers bravely proceeded with the indoor sessions and the field trips went forward.

**William F. Armstrong  
Special Achievement Award for Professional-  
Law Enforcement**

Bill was honored for his role as a Special Agent with the Wildlife, Marine and Environmental Law Enforcement Division at the US Army’s Aberdeen Proving Ground, MD. He directs and supervises the installation’s marine law enforcement over 40,000 acres of the Chesapeake Bay, ensuring the safety of the recreational boating community, implementing installation security measures, and monitoring commercial fishing activities which annually harvests seafood estimated at \$ 4 million from APG waters.

During the period 1999-2001, Bill worked with the United States Attorney in Baltimore, MD to identify and ultimately convict a group of individuals who illegally taking and selling in interstate commerce large quantities of protected fish species.

In 1999, he worked with the FBI, US Coast Guard and US Marshal Service and local law agencies to arrest and convict the individuals involved and seize approximately \$ 2 million worth of marijuana being grown and harvested on federal property.

The 2003 awards committee chair is Jim Hessel, Fort Huachuca. You may contact him regarding next year’s awards at:  
hessilj@huachuca-emh1.army.mil.



## 2002 PHOTO CONTEST WINNERS!!

Each year the photo contest draws in more entries and the NMFWA membership has an opportunity to vote for their first choices in each category. This year's lucky winners were Tessa Bashore, Jon Vandeventer, Mike Passmore, and Mark Gates. Tessa won first prize in the Wildlife category for her close-up picture of a turtle. Jon won first prize in the Installation Field Activities category for his photo of an angler at the edge of a river during the fall. Mike won first prize in the Landscape/Scenic category for his photo of a coyote on rocky terrain. Mark won first prize in the Humor/Fun category for his photo of a frog on a child's nose. Each first place winner received a \$30 gift certificate from Amazon.com. Congratulations to the Winners!

Julie Eliason (julie.eliason@ca.ngb.army.mil)

## American Fisheries Society's Annual Conference

NMFWA is sponsoring a half-day symposium at the American Fisheries Society's (AFS) Annual Conference in Baltimore, MD August 18-23. The title of the symposium is "Fisheries and Aquatic Resources Management on Dept. of Defense Lands: the "Unknown" Federal Player".

The symposium will be on Monday afternoon, 19 August from 1300-1730 hours. Eleven presentations will cover a wide array of fisheries and aquatics studies occurring on DOD lands.

For those who have never attended an AFS conference, let me just say that a lot of useful information is presented that attendees can take back and put to use (check out the program at <http://www.fisheries.org/annual2002/>). In fact, some of the techniques presented can be adapted for terrestrial studies as well.

The AFS Conference is a relaxed, fun-filled event. You can register on-line at the AFS website or print out an application and mail it in. The printable application is on-line at: <http://www.fisheries.org/annual2002/F0204p45-46.PDF>.

Jim Beemer (ravenwindrider@earthlink.net)

## 2001 Invasive Species Working Group (ISWG) Report

For 2001, the ISWG activities included:

1. Held first meeting on March 22<sup>nd</sup> at the Omni Shoreham Hotel in Washington, DC.
2. Finalized a Charter for the working group.
3. Established a committee for creating a webpage for the NMFWA website. The website should be finalized within the next couple of months. David Beckmann has been the Chair of that committee.
4. Established a committee for creating a database on invasive species. The draft database is currently out for ISWG members. Jeanne Dye has been the Chair of that committee.
5. Provided support to the 16<sup>th</sup> Triennial DOD Pest Management Conference in Jacksonville, Florida in February. We put together a technical session on invasive species. ISWG members gave seven presentations at this meeting.
6. Information sharing via email: a lot of correspondence has been generated through email on invasive species issues. Over the course of 2001, I would imagine that well over 100 email messages containing invasive info has been sent out.
7. In April I sent out an email requesting that members answer six questions on invasives---- the intent for this was to present the info to Peter Boice so that he would have info regarding the impacts of invasives on military training and T&E species. I also used some of this info for a presentation that I gave at the SERDP conference in Washington, D.C. in December.
8. Although the technical session (at our Dallas meeting) on Prairie and Rangeland Restoration on Military Lands doesn't necessarily pertain solely to invasives, myself and James Hessel, co-chairs for the session, have contacted other NMFWA members and a couple of individuals outside of DOD, to give papers at the session.

Kim Mello and Mark Dutton, Co-Chairs  
mellok@emh2.mccooy.army.mil;  
michael.dunning@carson.army.mil

## Technical Presentations Dallas, TX 2002

### *Technical Session 1*

#### **ENCROACHMENT AND MILITARY NATURAL RESOURCE MANAGEMENT**

*Chair: Scott Belfit, US Army Environmental Center, Bldg. 4435, Aberdeen Proving Ground, MD 21010-5400, (410) 436-1556, scbelfit@aec.apgea.army.mil*

**An Overview of Encroachment Issues, and What Installation Natural Resource Management Professionals Can Do About Them.** Stuart Cannon, *U.S. Army Forces Command, 1777 Hardee Avenue, SW, Fort McPherson, GA 30330-1062, (404) 464-5762, cannons@forscom.army.mil*

**Illegal Recreation Cabins on Remote USARAK Lands: Time to Halt a Growing Problem.** Steve Reidsma, *Center for Environmental Management of Military Lands, Directorate of Public Works, 1060 Gaffney Road, Fort Wainwright, AK 99709-6500, (907) 353-9685, steve.reidsma@wainwright.army.mil*

**Rural Encroachment: Conflicts between Natural Resources Management on Military Lands and Agricultural and Wildlife Management Area Objectives.** Daniel D. Gonnering, *Volk Field Combat Readiness Training Center (CRTC), 100 Independence Drive, Camp Douglas, WI 54618, (608) 427-1397, daniel.gonnering@wicrtc.ang.af.mil*

**Onslow Bight Conservation Partnership.** John Townson, *Installation and Environment Department, Marine Corps Base Camp Lejeune, NC 28542-0004 (910) 451-7227, townsonjr@lejeune.usmc.mil*

### *Technical Session 2*

#### **ETHICS IN DOD NATURAL RESOURCES MANAGEMENT**

*Chair: Richard Clewell, U.S. Army Materiel Command, Installations & Services Activity, Environmental Division, Rock Island, IL 61299-7190, (309) 782-8252, clewell@ria.army.mil*

**A Framework for Ethical Decision-Making.** Richard Clewell, *U.S. Army Materiel Command, Installations & Services Activity, Environmental Division, Rock Island, IL 61299-7190, (309) 782-8252, clewell@ria.army.mil*

**The Ethics of Military Land Management – A Commander's Perspective.** Stuart Cannon, *U.S. Army Forces Command, 1777 Hardee Ave, SW, Fort McPherson, GA 30330-1062, (404) 464-5762, cannons@forscom.army.mil*

**Hunting and Killing: When Does One Become the Other?** Robert Wardwell, *U.S. Army Research Laboratory, 2800 Powder Mill Road, Adelphi, MD 20783-1197, (301) 394-1061, rwardwell@arl.army.mil*

**The Powers To Be, Are They for Me?** Bill Starr, *McAlester Army Ammunition Plant, McAlester, OK 74501-9002, (918) 420-6611, starrwr@mcalestr-emh3.army.mil*

**Can't We All Just Get Along?** Junior Kerns, *U.S. Army White Sands Missile Range, White Sands Missile Range, NM 88002-5000, (505) 678-2224, kernsj@wsmr.army.mil*

### *Technical Session 3*

#### **FORESTRY AND WILDLIFE MANAGEMENT - WHERE DO WE STAND?**

*Chair: Jim Copeland, Naval Air Station Meridian, Public Works Department, Meridian, MS 39309, (601) 679-2482, jim.copeland@cnet.navy.mil*

**Ecosystem Management on a Heavily Forested Central Hardwood Landscape.**

Terry Hobson and Trent Osmon, *Naval Surface Warfare Center Crane, Crane, IN 47522*, (812) 854-1165, hobson\_t@crane.navy.mil, osmon\_t@crane.navy.mil

**Oregon White Oak Management with Benefits for Western Gray Squirrels.**

Gary McCausland, *Fort Lewis, WA 98433*, (206) 697-1740, mccauslg@lewis.army.mil

**Forestry and Wildlife Managers Join Forces to Combat a Common Enemy.**

Scott B. Smith, *Dare County Bombing Range, P. O. Box 2480, Manteo, NC 27954*, (919) 722-1011, scott.smith@seymourjohnson.af.mil

**Hardwoods as an Alternative Crop for the Lower Missouri River Floodplain.** Matthew Nowak, *Fort Leavenworth, KS 66027*, 913-684-2749, nowakm@leavenworth.army.mil

**The Habitat Restoration Working Group: Fort Bragg's Approach to Ecosystem Management.** Terry Myers, *Fort Bragg Military Installation, Fort Bragg, NC 28307*, (910) 396-2510, myerst@bragg.army.mil

*Technical Session 4*

**PRAIRIE RESTORATION EFFORTS ON MILITARY INSTALLATIONS**

Chair: **Kim Mello**, DTM/Wildlife Management Program, U.S. Army Fort McCoy, WI 54656-5226, (608) 388-5766, kim.mello@emh2.mccoys.army.mil

**Process-Oriented, Landscape-Scale Approach to Range and Prairie Restoration** Steven G. Whisenant, *Department of Rangeland Ecology & Management, Texas A&M University, 2126-TAMU, College Station, TX 77843-2126*, (979) 845-0317, s-whisenant@tamu.edu

**Yellow Star-Thistle Control at Fort Hunter Liggett, California: An Integrated Multiple Agency Approach.**

Arthur W. Hazebrook, *Directorate of Plans and Training, Bldg. 331, Fort Hunter Liggett, CA, 93928-7111*, (831) 386-2305; Art.Hazebrook@liggett-emh1.army.mil

**Returning the Prairie to the Prairie State.** Frank Koenig, *Midewin National Tallgrass Prairie, 30071 South State Route 53, Wilmington, IL 60481*, (815) 423-6370, fkoenig@fs.fed.us

**The Use of Prescribed Fire as a Tool for Restoration Efforts on Mid-Atlantic Navy Lands.**

E. Brian Hostetter and Catherine Benoit, *Commander Navy Mid-Atlantic Region, Little Creek, 1450 Gator Blvd., Bldg. 3165, Norfolk, VA 23521-2616*, (757) 462-4571 and (757) 462-7062, hostettereb@pwcnorva.navy.mil and benoitcm@pwcnorva.navy.mil

**Effects of Microbiotic Soil Crust Organisms on Seedling Growth of Blackbrush (*Coleogyne ramosissima*).** Gwyn L. Howard, *U.S. Army Engineer Research and Development Center, CERL, P.O. Box 9005, Champaign, IL 61826-9005*, (217) 352-6511, gwyn.l.howard@erdc.usace.army.mil

**Pollinator and Native Plant Habitat Restoration at Dyess Air Force Base, Abilene, Texas: A Research and Demonstration Project.** Don Pitts, *U.S. Army Engineer Research and Development Center, CERL, P.O. Box 9005, Champaign, IL 61826-9005*, (217) 352-6511 x- 7510, d-pitts@cecer.army.mil

*Technical Session 5*

**COASTAL CHALLENGES ON DOD INSTALLATIONS**

Chair: **Jim Bailey**, U.S. Army Garrison, Aberdeen Proving Ground, MD 21005-5001, (410) 278-6748, jbailey@usag.apg.army.mil



**Multi-Agency Cooperative Research Project.** Bob Wardwell, *U.S. Army Research Laboratory, Adelphi, MD 20783-1197*, (301) 394-1061, rwardwell@arl.army.mil

**Shoreline Protection – Model T to SUV.** Jim Bailey, *U.S. Army Garrison, Aberdeen Proving Ground, MD 21005-5001*, (410)78-6748, jbailey@usag.apg.army.mil

**Achieving a Target Elevation within Created Marsh Using Hydraulically Placed Dredge Material at Atkinson Island in Upper Galveston Bay, Texas.** Georganna Collins, *Turner, Collie, and Braden, Inc., 5757 Woodway, Houston, TX 77057-1599*, (713) 267-3262, collinsg@tcbhou.com

**Use of Green Engineering in Chesapeake Bay Shoreline Management.** Tommy Wright, *Naval Facilities Engineering Command, ESA Chesapeake, Washington Navy Yard, 1314 Howard St., Bldg 212, Washington, D.C. 20374-5018*, (202) 685-3447, wrightta@efaches.navfac.navy.mil and Kyle Rambo, *Natural Resources Office, Patuxent River Naval Air Station, 22541 Johnson Rd., Bldg. 1410, Patuxent River, MD 20670-1700 (301-757-0005)*, ramboke@navair.navy.mil.

**Marine Resource Assessments for the U.S. Atlantic Fleet Operating Areas.** Deanna Rees, *EFD Atlantic Operations, 1510 Gilbert Street, Norfolk, VA 23511-2699*, (757) 322-4940, reesdr@efdlant.navfac.navy.mil

## Technical Session 6

### FIELD NOTES (MISCELLANEOUS TOPICS)

Chair: **Dan Friese and Mary Anderson**, HQ AFCEE/ECS, 3207 North Road, Brooks AFB, TX 78235-5344, (210) 536-3808, daniel.friese@brooks.af.mil; (210) 536-3808, mary.anderson@brooks.af.mil

**Something from Nothing – Conservation Highlights at Langley Air Force Base.** Patsy Kerr, *Langley Air Force Base, Conservation and Analysis, 1 CES/CEV, 37 Sweeney Blvd., Langley Air Force Base, VA 23665-2107*, (757) 764-1090, patsy.kerr@langley.af.mil

**Wildlife Diseases — Considerations for the Field Biologist.** Thomas Smith, *U.S. Army Engineer Research and Development Center, CERL, P.O. Box 9005, Champaign, IL 61826-9005*, (217) 352-6511 x-7414, thomas.smith@erdc.usace.army.mil

**A Small Mammal Inventory of Fort Richardson, Alaska.** Kellie N. Peirce, *Center for Environmental Management of Military Lands, Colorado State University, U.S. Army Alaska, Directorate of Public Works, APVR-RPW-EV, 730 Quartermaster Road, Fort Richardson, AK 99505-6500*, (907) 384-1015, kellie.peirce@richardson.army.mil

**The Use of Conspecific Attraction in the Conservation of Endangered Bird Species.** Scott Schlossberg, *Program of Ecology and Evolutionary Biology, University of Illinois, 606 E. Healey St., Champaign, IL 61820*, (217) 333-2235, schlsbr@uiuc.edu; Mike Ward, *Department of Animal Biology, University of Illinois, Champaign, IL 61820*, mpward@uiuc.edu; Tim Hayden, *U.S. Army Engineer Research and Development Center, CERL, Champaign, IL 61826*, t-hayden@cecer.army.mil; John Cornelius, *III Corps Fort Hood, Natural Resources Branch, Rod & Gun Club Loop, Bldg. 1939, Fort Hood, TX 76544*, (254) 287-2885, john.cornelius@hood.army.mil

**Gopher Tortoise Management on Moody Air Force Base, Georgia.** Gregory W. Lee, *Moody Air Force Base, 347 CES/CEV, 3485 Georgia St., Moody AFB, GA 31699-1707*, (912) 257-3070, gregory.lee@moody.af.mil

**Relocation of Gopher Tortoises (*Gopherus polyphemus*) on Camp Shelby Training Site for Construction of the Sonny Montgomery Multi-Purpose Range Complex - Heavy.** Colleen D. Heise and Deborah M. Epperson, *Camp Shelby Field Office, The Nature Conservancy, CSTS-ENV, Bldg. 6678, Camp Shelby, MS 39407*, (601) 558-2797-2931, colleen.heise@ms.ngb.army.mil, deborah.epperson@ms.ngb.army.mil

## Technical Session 7

### MANAGING ECOSYSTEMS INTO THE FUTURE

Chair: **Dorothy M. Gibb and Douglas Ripley**, Horne Engineering Services, Inc., 2750 Prosperity Avenue, Suite 450, Fairfax, VA 22031-4312, (703) 641-1100, dgibb@horne.com; Air National Guard Environmental Division, ANG/CEVP, 3500 Fetchet Avenue, Andrews AFB, MD 20762, (301) 836-8862, douglas.ripley@ang.af.mil

### The Status of Installation Ecosystem Management: Where Do We Go From Here?

Dorothy M. Gibb and Doug Ripley, *Horne Engineering Services, Inc.*, 2750 Prosperity Avenue, Suite 450, Fairfax, VA 22031-4312, (703) 641-1100, dgibb@horne.com; Air National Guard Environmental Division, ANG/CEVP, 3500 Fetchet Avenue, Andrews AFB, MD 20762, (301) 836-8862, douglas.ripley@ang.af.mil

### Ecoregional Planning and Military Land Use.

Robert Anderson, *HQ U.S. Army Training and Doctrine Command, Fort Monroe, VA 23651-5000*, (757) 788-2077, robert.anderson@monroe.army.mil and William Woodson, *ACSIM, 600 Army Pentagon, Washington, D.C., 20310-0600*, (703) 693-0680, william.woodson@hqda.army.mil

### Ecosystem Management at the Landscape Scale: An Adaptive Management Approach by US Army Alaska.

Terry Schick, *ABR Inc., Environmental Research & Services, P.O. Box 240268, Anchorage, AK 99524-0268*, (907) 344-6777 tschick@abrinc.com; Ellen Clark and Jeff Mason, *Fort Greely, P.O. Box 1291, Delta Junction, AK 99737*, (907) 873-1614, ellen.clark@wainwright.army.mil, jeff.mason@wainwright.army.mil; Steven Drake, Gary Larsen, and Kellie Peirce, *Director of Public Works, 730 Quartermaster Road, ATTN: APVR-RPW-EV, Fort Richardson, AK 99505-6500*, (907) 384-3074, steve.drake@richardson.army.mil, gary.larsen@richardson.army.mil, kellie.peirce@richardson.army.mil

### Partnering on GIS Database Development.

James Curtin, *University of Kansas and Haskell Indian Nations University, Lawrence, KS 66044*, (785) 840-9046; Diane Mann and William Meyer, *U.S. Army Engineer Research and Development Center, CERL, P.O. Box 9005, Champaign, IL 61826-9005*; (217) 373-6741, dk-mann@cecer.army.mil and (217) 352-6511, william.d.meyer@cecer.army.mil.

### Watersheds as a Framework for Natural Resource Management Decisions at Fort Belvoir, Virginia.

L. Jean O'Neil and Chester O. Martin, *Environmental Laboratory, U.S. Army Engineer Research and Development Center, 3909 Halls Ferry Rd., Vicksburg, MS 39180*, (601) 634-3641, l.jean.o'neil@erdc.usace.army.mil; (601) 634-3958, chester.o.martin@erdc.usace.army.mil; and Dorothy Keough, *Environmental and Natural Resources Division, Directorate of Installation Support, 9430 Jackson Loop, Fort Belvoir, VA 22060-5130*, (703) 806-0049 keoughd@belvoir.army.mil

## Call For Papers for the 2003 NMFVA Annual Training Session

This is a call for papers for the 2003 NMFVA conference. Following is a list of proposed technical sessions and their points of contact:

**Wildlife Disease and Pathology** — Rhys Evans  
evansrm@29palms.usmc.mil

**Invasive Species** - Dick Gebhart, d-gebhart@cecer.army.mil

**Scientific Monitoring** — Terry Bashore,  
terry.bashore@langley.af.mil

**20 Years of NMFVA** — Tom Warren,  
Thomas.Warren@carson.army.mil

**Natural Resources Coordination with Environmental Issues** - Doug Lister, ListerDP@navair.navy.mil

**Survey Technique Innovations** — Don Pitts,  
Donald.Pitts@ERDC.usace.army.mil

**Wildlife Hazards** — Hildy Reiser  
hildy.reiser@holloman.af.mil

**Hunting Fishing and Misc Issues** — Tom Smith,  
Thomas.Smith@ERDC.usace.army.mil

Please submit titles of papers for next years session as soon as you can. You make the program.

Any additional questions or concerns can be sent to Jim Bailey, Program Chair at jim.bailey@usag.apg.army.mil

★★  
 ★ **Eastern Indigo Snake Studies** ★  
 ★ **at Fort Stewart** ★  
 ★★★

As part of the installation’s Endangered Species Management Plan (ESMP), Fort Stewart’s Fish and Wildlife Branch is monitoring the federally listed eastern indigo snake. Populations of this Coastal Plain species in southeastern Georgia are invariably associated with longleaf pine (*Pinus palustris*) – turkey oak (*Quercus laevis*) – wiregrass (*Aristida beyrichiana*) sandhills near blackwater streams. This species is known from several sites on the installation.

Reaching up to 8.6 feet (2.6 meters) in total length, the eastern indigo snake, *Drymarchon corais couperi*, is the largest snake in North America. This species was federally listed as threatened in 1978 following a decline in indigo snake numbers during the 1960s and 1970s. Factors behind this decline included habitat destruction, highway mortality, and gassing of gopher tortoise (*Gopherus polyphemus*) burrows. All of these continue to threaten the snake’s survival today. In addition, some populations were depleted by collection for the pet trade prior to listing. Currently, Fort Stewart harbors large and secure populations of both the eastern indigo snake and gopher tortoise. Since these species occur in upland habitats that are fire-maintained ecosystems, the installation’s long history of prescribed burning has contributed significantly to the health of these populations. Consequently, the U.S. Fish and Wildlife Service and the Georgia Department of Natural Resources have praised Fort Stewart for its proactive approach to protecting and managing the indigo snake.

Because indigo snakes are daytime-active, large, and have extensive home ranges of up to several hundred acres, they are a highly visible species. Thus, habitat fragmentation increases the chances of a snake being killed on a roadway or by the type of person who kills snakes indiscriminately. In southern Georgia and northern Florida, indigo snakes are intimately associated with burrows of

the gopher tortoise. They are known to forage, nest, and shelter in gopher tortoise burrows, relying on them for winter dens. In this region, the gassing of tortoise burrows is sometimes practiced by persons who harvest eastern diamondback rattlesnakes (*Crotalus adamanteus*) for local rattlesnake roundups. This method of capture is illegal and known to be lethal to indigo snakes. Damage or disturbance to gopher tortoise burrows is prohibited by Georgia state law and by Fort Stewart Army Regulation 420-4.

Currently, indigo snake population monitoring efforts on Fort Stewart, all of which complement each other, include: 1) a long-term mark-recapture study being conducted by installation staff to better understand population trends; 2) a health assessment study being conducted by the Wildlife Conservation Society, St. Catherine’s Island Wildlife Survival Center; 3) a radio-transmitter study of home range and seasonal activity, funded by the U.S. Fish and Wildlife Service and being conducted by the University of Georgia. As part of the ESMP, gopher tortoise populations on the installation are also being monitored by installation staff.

An ongoing indigo snake mark-recapture study (1998-present) is being conducted by Fish and Wildlife Branch biologists. Thus far, a total of 36 indigo snakes (24 males, 12 females) have been marked at 2 study sites. Snakes are typically captured under mild weather conditions during the cooler months of the year (November-April) as they bask near tortoise burrow entrances. All captures are measured, weighed, sexed, and marked with PIT (passive integrated transponders) tags and by clipping belly scales. PIT tags, a little bit larger in size than a grain of rice, contain electromagnetic coils that read like a bar code when scanned. They are injected just beneath the skin of the snake.



Preliminary results of the mark-recapture study have yielded some interesting information. Recapture data indicates that indigo snakes return to the same sandhills, even using some of the same tortoise burrows, year-after-year. Another finding is that male indigo snakes reach greater maximum lengths than do females. Numerous captures of subadult and small adult indigo snakes (4-5 feet in length) indicate that reproduction and successful recruitment is occurring for these populations.

Fish and Wildlife Branch staff are collaborating with Dr. Terry Norton, DVM, on an indigo snake health assessment study. Indigo snakes from Fort Stewart are held briefly in captivity where a complete physical exam-including collection of ectoparasites- is performed. Blood samples are taken from each snake for subsequent heavy metal analysis and pesticide screening. A previous study found very high plasma calcium and phosphorus levels in captive indigo snakes, and Dr. Norton is interested to determine if these elevated blood levels are found in wild specimens. The cause of a possible vesicular condition that causes skin boils on wild indigo snakes during the winter is also being investigated.

Supported by Section 6 funding from the U.S. Fish and Wildlife Service, Dr. Joseph Meyers and doctoral student Natalie Hyslop, University of Georgia, are soon to begin a radio telemetry study of the indigo snake on Fort Stewart. Dr. Norton will assist with the surgical implantation of the radio transmitters, and Ms. Hyslop will track adult male and female snakes in the field for extended periods. The transmitters they have selected record temperature and have a life of 3 years. Ultimately, this study will provide valuable information on several aspects of this species' ecology including home range size and seasonal activity, as well as identifying important foraging areas.

Because of their importance to the welfare of indigo snake populations and numerous other animal species, Fish and Wildlife Branch personnel are also monitoring gopher tortoise populations. The long and deep burrows of adult tortoises (on average about 15 feet long and 7 feet deep) are thermally-stable environments inhabited by a diverse array of animals, including over 300 species of invertebrates. Monitoring involves foot surveys of tortoise colonies during the species' period of activity (April-October), and is dependent on burrow count data because tortoises are secretive and seldom on the surface. Tortoise burrows are classified as active or inactive based on the presence of recent tortoise tracks, and are subsequently measured to provide a reliable size estimate of the occupying tortoise.

As a result of these studies, the Fish and Wildlife Branch biologists will have a better understanding of the installation's eastern indigo snake population, helping to ensure that the training mission and indigo snake management remain compatible.

Dirk J. Stevenson (stevenson@stewart.army.mil)



*Photo by Beth Willis-Stevenson*

★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★  
 ★ **Forestry and Wildlife** ★  
 ★ **Managers Join Forces to** ★  
 ★ **Combat a Common Enemy at** ★  
 ★ **Dare County Bombing Range** ★  
 ★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★★

Dare County Bombing Range (Dare) was established in 1964 in northeastern North Carolina. It is situated on a peninsula bounded by the Alligator River, Pamlico Sound and the Croatan Sound. Dare is completely surrounded by the Alligator River National Wildlife Refuge, which is administered by the U.S. Fish and Wildlife Service (USFWS).

Dare provides for bombing and gunnery training of tactical fighter pilots in the Air Force, Navy, Marines and Air National Guard. Ordnance delivery and strafing are restricted to two impact areas.

The 42,000 acres of buffer land are managed under multiple-use policies. This buffer land consists of swamp forests, pocosins, freshwater marshes and saltwater marshes. They support several protected endangered and threatened species, which are the American alligator, the reintroduced red wolf and red cockaded woodpecker (RCW).

At Dare, RCW inhabit old growth pond pine trees. This is an indication that this species can adapt to survive in an atypical habitat. Current population estimates indicate that there are approximately thirty RCWs in sixteen clusters. There are approximately 14,500 acres of pond pine forest that is available on Dare for RCW habitat. The pine trees are more than 120 years old and the average basal area of the forest stands is 130 square feet. The dense understory of the stands is nearly impenetrable due to heavy brush and vines.

Pond pine is low-grade timber and therefore, is not managed for commercial goals. In accordance with Federal law, Air Force forestry

dollars can only be spent in support of the commercial production of timber. Factors that affect the marketability of pond pine include: ground conditions that are wet and unstable, limited access to trees due to so few roads and it is approximately 100 miles to the closest mill. Therefore, this forest ecosystem was left unmanaged.

The pond pine forest ecosystem is under extreme stress because of the age of the trees and stand density and therefore is a prime target for the southern pine beetle (SPB). SPB have been present on Dare in small isolated pockets from time to time. However, during the spring and summer of 1995 SPB populations increased significantly.

During July of 1995 an entomologist from the U.S. Forest Service Forest Health Field Office in Asheville, NC visited Dare to evaluate the beetle activity. The evaluation report stated that beetle activity was at outbreak proportions and provided recommendations on methods to monitor and control the beetles. The report also provided guidance on how to apply for funds from the U.S. Forest Service Forest Pest Suppression Program.

Aerial reconnaissance documented 110 beetle spots on Dare and 100 spots on the adjacent Alligator River NWR. The spots varied in size from one tenth of an acre to more than 300 acres. By December, 120 spots had been detected on Dare. Many SPB spots continued to enlarge as new trees were infested during warm weather in the fall of 1995.

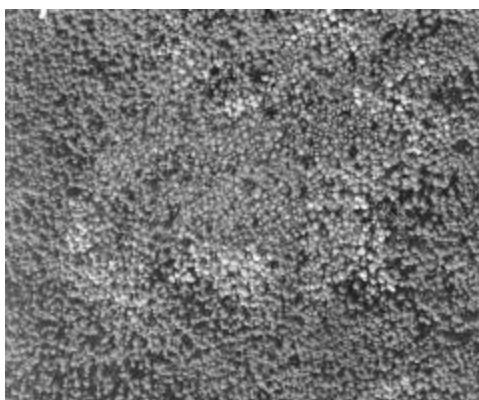
SPB control activities on Dare in 1995 were limited to salvage harvest operations in commercial loblolly pine forest stands that were determined to be more than one half mile from known active RCW clusters.

Coordination with the USFWS, as required by Section 7 of the Endangered Species Act, was conducted prior to any beetle control activity within one half mile of known active RCW clusters. By the fall of 1995, 58 beetle spots were identified in RCW habitat. Approximately fifty percent were in close proximity or threatening RCW cavity trees. Several RCW cavity trees had been taken by the time a biological assessment was completed and we received approval from the USFWS to initiate beetle control activities.



Dare began receiving pest suppression funding from the U.S. Forest Service Forest Pest Suppression Program in fiscal year 1996. We received a total of \$170,000.00 from the US Forest Service over a period of three years to control SPB infestations. The monies were “no year” funds and were able to be carried over to subsequent fiscal years. The funds were used for aerial reconnaissance and aerial photography to determine the location and magnitude of active beetle spots. We hired contractors to clear access trails to beetle spots, cut down infested trees and to cut buffer strips around the active head of the beetle spots.

Beetle impact areas (light colored trees) on Dare



The forestry staff at Dare developed the following standards for SPB control. Standards from the U.S. Forest Service Final Environmental Impact Statement for the Suppression of Southern Pine Beetle (Feb 1987) were incorporated in the standards:

- Disturbance in RCW clusters was minimized during breeding season.
- No control activity was conducted in active clusters until the RCW young had fledged.
- Only the infested trees were cut in spots that contained less than ten infested trees
- Infested trees within 200 feet of an active RCW cavity tree were cut only to protect the cavity tree.
- Trees already vacated by SPB were not cut.
- Spots containing more than ten infested trees were identified and a 120-foot wide buffer of uninfested trees were cut in an effort to curtail the advancement of the beetles.
- Inactive RCW cavity trees were to be cut if infested to protect the rest of the cluster.

The forestry staff began monitoring populations of SPB and their associated predatory clerid beetles in 1996. The beetles are captured using multiple funnel traps containing pheromone bait in the spring of the year. The traps are placed in pockets of hardwoods within pine stands each spring. The percent of clerid beetles to that of the samples are collected on a weekly basis for four to six weeks and sent to the USFS Forest Health Field Office for analysis.

We also participated with Virginia Polytechnic Institute as a test site for a study on the application of a synthetically produced pheromone; named Verbenone. The study was conducted during the summers of 1996 and 1997. This pheromone inhibits the aggregation behavior of the southern pine beetles. Using a variety of application methods it can reduce and can even stop the rate of spread of the beetles. A workshop was held at Dare in 1997. The Environmental Protection Agency approved Verbenone for use in 1999.

The beetle population began to decline during fiscal year 1999. By fiscal year 2000, the population reached the US Forest Service “Static or Moderate Change” category. Continued monitoring shows that a remnant beetle population is still present on Dare. A small area, less than one acre, was treated in fiscal year 2001. However, we must remain vigilant because beetle activity remains high throughout the peninsula.

Biologists perform aerial reconnaissance at least four times a year using an average of \$7,000.00 paid for with Conservation Program funds and the forestry staff continue to set out beetle traps which are sent to the USFS pest management lab for evaluation.

In conclusion, the forestry and wildlife staffs worked together by pooling their knowledge, efforts and funding resources to combat a common forest pest that threatened both the commercial forest program and the habitat of a federally protected endangered species. Both staffs continue to monitor the SPB population by setting out beetle traps and performing aerial reconnaissance using helicopters.

Scott B. Smith (scott.smith@seymourjohnson.af.mil)

## NMFWA BOARD OF DIRECTORS

President Jim Beemer, US Military Academy, West Point, NY DSN 688-3857, 845-938-3857, FAX 2324, ravenwindrider@earthlink.net  
Past President Don Pitts, USAERDC, CERL, Champaign, IL 217-352-6511 (X7510), FAX 373-7266, Donald.Pitts@erdc.usace.army.mil  
President-Elect Chester Martin, USAERDC, WES, Vicksburg, MS 601-634-3958, FAX 3726, chester.o.martin@erdc.usace.army.mil  
Vice President Jim Bailey, USAGAPG, APG, MD 410-278-6748, DSN 298-6748, FAX 6779, jim.bailey@usag.apg.army.mil  
Treasurer Tammy Conkle, Cmdr Navy Reg SW, San Diego, CA 619-545-3703, DSN 735-3703, FAX 3489, conkle.tamara@ni.cnrsw.navy.mil  
Secretary Julie Eliason, CANG, HQ Camp Roberts, CA 805-238-8265, DSN 949-8265, FAX 8155, julie.eliason@ca.ngb.army.mil  
Director At-Large Rhys Evans, MAGTFTC, Twenty-nine Palms, CA 760-830-7396X234, DSN 230-7396, FAX 5718, evansrm@29palms.usmc.mil  
Director At-Large Jim Copeland, NAS Meridian, Meridian, MS 601-679-2482, DSN 637-2482, FAX 3582, jim.copeland@cnet.navy.mil  
Director East Carl Petrick, Eglin AFB, Niceville, FL 850-882-4164, DSN 872-8164, FAX 5321, carl.petrick@eglin.af.mil  
Director East Scott Smith, Dare County AF Range, Nags Head, NC 919-722-1011, DSN 722-1011, FAX 0494, scott.smith@seymourjohnson.af.mil  
Director West Coralie Cobb, SW Nav Fac Eng Command, San Diego, CA 858-577-6238, DSN 267-6238, FAX 6212, CobbCH@efdswn.navfac.navy.mil  
Director West Hildy Reiser, Holloman AFB, NM 505-572-3931, DSN 572-3931, FAX 5080, hildy.reiser@holloman.af.mil  
FAWN Editor Mike Passmore, USAERDC, WES, Vicksburg, MS 601-634-4862, FAX 3726, michael.f.passmore@erdc.usace.army.mil

## NMFWA COMMITTEE CHAIRS

Archives Tom Warren, Fort Carson, CO 719-526-1706/2022, DSN 691-1706/2022, FAX 3478, Thomas.Warrent@carson.army.mil  
Audit Rafael Corral, Fort Bliss, TX, 915-568-6977, DSN 978-6977, FAX 3548, corralr@bliss.army.mil  
Awards Jim Hessil, Ft Huachuca, Sierra Vista, AZ 520-533-7084, DSN 821-7084, FAX 3043, hessilj@huachuca-emh1.army.mil  
Government Affairs Jim Copeland, NAS Meridian, Meridian, MS 601-679-2482, DSN 637-2482, jim.copeland@cnet.navy.mil  
Law Enforcement Michael Dunning, Ft Carson, CO 719-579-9094/9088, FAX 576-8061, michael.dunning@carson.army.mil  
Membership Mike Passmore, USAERDC, WES, Vicksburg, MS 601-634-4862, FAX 3726, Michael.F.Passmore@erdc.usace.army.mil  
Nominations Don Pitts, USACE, CERL, Champaign, IL 217-352-6511 (X7510), FAX 373-7266, Donald.Pitts@erdc.usace.army.mil  
Outreach Rhys Evans, MAGTFTC, Twenty-nine Palms, CA 760-830-7396X234, DSN 230-7396, FAX 5718, evansrm@29palms.usmc.mil  
Reserve Account Scott Smith, Dare County AF Range, Nags Head, NC 919-722-1011, DSN 722-1011, FAX 0494, scott.smith@seymourjohnson.af.mil  
WMI Thomas Wray II, NAVSURFWARCENDIV, Dahlgren, VA 540-653-4186, DSN 249-4186, FAX 2339, twray@nswc.navy.mil  
2003 Program Jim Bailey, USAGAPG, APG, MD 410-278-6748, DSN 298-6748, FAX 6779, jim.bailey@usag.apg.army.mil  
2003 Host Terry Meyers, Ft. Bragg, NC, POC: Don Cockman, 910-386-7506(X108), cockmand@bragg.army.mil



**Michael F. Passmore,**  
**Editor**  
**CEERD-EE-E**  
**3909 Halls Ferry Road**  
**Vicksburg, MS 39180-6199**

**PRESORTED**  
**STANDARD**  
**U.S. Postage Paid**  
**VICKSBURG, MS**  
**PERMIT # 176**

**NEWSLETTER OF THE NATIONAL MILITARY**  
**FISH AND WILDLIFE ASSOCIATION**