US Army Corps of Engineers®

Stewardship news

Volume 3, Issue 2: June 2020

YOUR Thoughts

We are looking for contributors and ideas .

- If you have a topic, success story, lesson learned, or helpful suggestion—let us know.

Send to: *Tara.J.Whitsel@usace.army.mil*

Stewardship News is an unofficial publication of the U.S. Army Corps of Engineers (USACE). This online publication is produced quarterly with the purpose of providing its readers information about the USACE Stewardship Program. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.

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Your Stewardship HQ Update

POC: Jeremy Crossland, Program Manager for Land Use, HQUSACE, 202-761-4259

I would like to take this opportunity to introduce Ms. Roseana Burick as the new HQUSACE Senior Policy Advisor for the Environmental Stewardship Business Line. Prior to her start here at HQ as a Program Manager for the NWD/POD Regional Integration Team, Ms. Burick was the Operations Section Chief for Technical Support in Louisville District. As the LRL Operations Section Chief, she oversaw the natural resources management program for the 20 lakes and 10 locks in the District, as well as, the FRM, REC, and ENS budgets. Roseana, we look forward to working with you in your new role!

Over the past several months, many of us have assumed new roles and found innovative and smart ways to continue our natural resource work, while ensuring the safety of our co-workers and visitors during the worldwide pandemic. At Lavon Lake, the Environmental Stewardship Team assisted the Flood Risk Management Team in performing a dewatering and inspection of the stilling basin below the tainter gates. The ENS team provided a critical function of surveying, prior to the dewatering, for mussels in the stilling basin. Then, as the water was pumped down, they collected, identified and relocated all of the mussels found. Additionally, they relocated all native fish species once the water was pumped down to a suitable level, before complete dewatering and inspection by District Engineering staff. At the Fern Ridge Project in Portland District, stewardship staff completed their annual Bradshaw's lomatium survey which is part of recovery actions noted in the project's biological opinion. And, at Baltimore District's Raystown Lake Project, natural resource staff continued to work with contracting officers to award their first aquatic herbicide application contract targeting hydrilla. While these are just a few examples of work from around our USACE projects, we thank you all for your efforts. Continue to stay safe!

New ENS Business Line Manager!

I would like to thank everyone for the warm wishes as I start my new permanent position as the Environmental Stewardship Business Line Manager. My first week on the job has been to participate in the HQ Cross Business Line Rank for the FY22 budget. With my time working in NRM and my most recent stint as a Programmer with the Regional Integration Teams, I have gained unique insights into our program from the ground up and across the Enterprise. I am looking forward to putting these to work for you, and strengthening the Environmental Stewardship Program.

- Roseana Burick

Project Spotlight: Clarence J. Brown Dam, A Wetland Success Story

POC: Brian Menker, C.J. Brown Dam, 937-325-2411

When USACE built the Clarence J. Brown Dam and Reservoir, like all big engineering projects, a lot of earth was moved. The emergency spillway was excavated through layers of glacial deposits, most of which were sand and gravel. In a spillway flood event the crest of the spillway would likely erode; so a concrete chute and stilling basin were built at the end. A gently sloping channel was built to guide the water back into Buck Creek a few hundred yards downstream of the main dam.

The basin below the spillway is filled with gravel for public safety, and is saturated with water for much of the year. This damp, rocky area has been colonized by specialized sedges that can tolerate the growing conditions. *Article continued on page 2.* *Photo: Paiute Dancer found at C.J. Brown Dam.*

A Wetland Success Story Continued.

Below the concrete basin the sloping channel has also been colonized by native sedges, grasses and other wildflowers characteristic of the wet prairie/fen meadows that once blanketed the Buck Creek valley. Most of the water that sustains this wet meadow comes from a spring-fed stream that cascades out of the nearby woodlot and spreads out across the channel.

Maintaining the unique habitat: While some plants from nearby remnant prairies and fens have been introduced here, the majority of the plant community grew from the seed bank over the last four decades.

Invasive plants that we work to control in parts of the wetland include narrowleaf cattail, yellow iris, and a small amount of purple loosestrife.

Photos above: Clarence J. Brown Dam Spillway

Finding a Rare Damsel:

Of the wide variety of wildlife that rely on this wet meadow, the most colorful and interesting inhabitants are the dragonflies and damselflies. Each summer the project partners with members of the Clark County Audubon Society to host butterfly and dragonfly walks in the adjacent restored prairie; the walks always include a stop at the wet meadow.

In July 2019, a damselfly called the Paiute Dancer was found here by Jim Lemon, one of the organizers of the Ohio Odonata Survey. In 2018, Odonata (the order of dragonflies and damselflies) were being sought all over the state, so I mentioned to Jim that the wet meadow was a good place to look. The Paiute Dancer had only been confirmed from Ohio in 2018, from a site one county away from CJ Brown. The nearest known sighting of this damselfly was 400 miles west of our area. Then, Jim and others found a large thriving colony in the spillway wetland.

After I saw a photo of one, I remembered a few pictures I had taken at the spillway site in August, 2004 of some damselflies that I couldn't identify. At the time, I had scanned and emailed the pictures to an expert in Cleveland who was also not sure of the species. Amazingly, these photo files were still on my computer, so I sent them to the Odonata survey, and they confirmed they were Paiute Dancers. They have since found photos from another site dating to 2014; but my photos show that the Paiute Dancers were in western Ohio some ten years earlier than that!

C.J. Brown Dam and Reservoir

The C.J. Brown Dam and Reservoir is located near Springfield in west central Ohio, less than a day's drive from Indianapolis, Cleveland, Louisville or Toledo. Authorized by the Flood Control Act of 1938, the project's primary purposes include flood risk management, fish and wildlife management, and recreation. The dam was built across Buck Creek to control flooding in the Ohio River basin. Made of rock fill with a sand and gravel core, the dam measures 6,620 feet across and 72 feet high with a drainage area of 83 square miles. The project has 4,076 acres of fee lands with a 2,120 acre lake.

C.J. Brown exists as a cooperative management effort between USACE and the Ohio Department of Natural Resources—Division of Park and Recreation and Natural Areas and Preserves. In addition, one private non-profit organization, Clark County Historical Society, plays an important role at the park.

The David Crabill Homestead is listed on the National Register of Historic Places. Built around 1830, the C.J. Brown offers a glimpse of the area's past. The homestead was acquired by USACE during the acquisition of the land for the construction of the reservoir. It is now operated by the Clark County Historical Society.

ISLT—We are here for you!

POC: Invasive Species Leadership Team.

The Invasive Species Leadership Team (ISLT) is here as a resource for you to provide strategic recommendations on a range of invasive species issues. The ISLT is trying to assist and aid in disseminating invasive species information and their impacts on USACE.

Here are some topics that have come to our attention.

What are the applicable Executive Orders (EO's) and Policies USACE is operating under?

1. **Executive Order 13112,** *Invasive Species*. This executive order requires federal agencies including the USACE to meet the National Invasive Species Management Plan (NISMP) goals.
2. **Executive Oder 13751**, *Safeguarding the Nation from the Impacts of Invasive Species. NISC Guidance, National Invasive Species Management Plan 2016-2018.* This order amends Executive Order 13112 and directs actions to continue coordinated Federal prevention and control efforts related to invasive species.
3. **John D. Dingell, Jr. Conservation, Management, and Recreation Act of 2019.** This act calls for a substantive annual net reduction of invasive species populations or infested acreage on land or water managed by the federal agency.
4. **USACE Invasive Species Policy Memorandum dated 2 June 2009**. This policy memorandum requires all USACE Civil Works projects and programs to address invasive species in accordance with the NISMP.
5. **EP and ER 1130-2-540.** Environmental Stewardship Operations and Maintenance Guidance and procedures.

Do you already consider invasive species in planning or as part of operation and maintenance incorporating standard language for Corps OMPs, Master plans, SOWs, partnership agreements, contracts conditions, regulatory permits, and real estate outgrants? Share it with your ISLT MSC POC!

ISLT members are tasked to coordinate and assist all business lines with initiative and competencies in implementing best management practices where invasive species prevention, early detection, reduction, and control are considered.

If you don't have experience or knowledge in regards to invasive species, but are responsible for planning, writing, or implementing Corps OMPs, Master plans, SOWs, partnership agreements, contract conditions, regulatory permits, or real estate outgrants, **here are our TOP 5 considerations for inclusion:**

1. **Certified Pesticide Applicators**. DOD and most if not all states have licensing or certification with reporting and training requirements. These requirements include: proper identification of pests (weeds, insects), proper application and treatment methods, along with continued learning. These trainings also cover decontamination, cleaning, and inspection of equipment to minimize introduction and spread of invasive species and noxious weeds.
2. **Integrated Pest Management Plan**. If your project or district doesn't have an IPMP, your state's invasive species or weed coordinator is a good resource. All 50 states have noxious weed or pest lists. Look at your state today!
3. **Integrated and Adaptive Management**. Know the Best Management Practices (BMPs) for chemical, mechanical, and biological control of invasive species. Your states and county weed/pest coordinators typically
4. **Regulatory Requirements.** If actions occur in an aquatic environment or below the ordinary high water mark (OHWM) then a National Pollutant Discharge Elimination System (NPDES) permit is required. This is a general pesticide permit for pesticide point source discharges.
5. **Planning Considerations.** Don't forget to consider laws such as the Endangered Species Act (ESA), National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA).

DoD Relevant Pest Alerts Available!

Pest Alerts are a signature program of the North Central IPM Center to help support initiatives to track, report and manage invasive pests. The Centers' Pest Alerts are freely accessible and available for download. Select pest alerts are available to be printed and delivered, free of charge, and are marked on the specific Pest Alert page. Archived Pest Alerts are alerts that have been in circulation for several years, and resources have since been developed on a state-by-state basis, rendering the alerts to historical data.

Click here to access the site!

ERDC—Environmental Laboratory Works for the Birds!

POC: Michael Guilfoyle, Richard Fischer, and Jake Jung, (ERDC)

North American birds are in trouble. Many populations are experiencing long-term declines, and recent estimates suggest North America has lost approximately 3 billion birds, or 29% of the total continental bird population since 1970.

Of particular concern are grassland birds, shorebirds, and long-distance forest-dwelling migratory songbirds (e.g., warblers, flycatchers and tanagers). Riparian habitats, including bottomland hardwoods, terrestrial and coastal wetlands and other mesic habitats, are a primary feature of lands managed by the USACE. Reservoir project lands, coastal ports and harbors, thousands of miles of inland and coastal waterway systems, and thousands of hectares of wetland and coastal habitat restoration projects represent approximately 5 million hectares of land under influence of USACE natural resource managers. Moreover, the USACE will likely have jurisdiction or responsibility to manage or monitor newly created or restored habitats through mitigation and/or restoration projects. These lands support an estimated 17 bird species listed as Threatened or Endangered under the Endangered Species Act (ESA), and approximately 150 additional species that are considered regionally rare, sensitive, or of conservation concern throughout the conterminous United States.

Wildlife Team biologists from the U.S. Army Engineer Research and Development Center, Environmental laboratory, Ecological Resources Branch, have supported USACE Districts and numerous military installations in meeting legal compliance and conservation goals pertaining to bird populations over the past 3 decades. These researchers have facilitated establishment of seasonal bird surveys or monitoring efforts for multiple USACE Districts, including the Walla Walla, Fort Worth, Nashville and Baltimore Districts, and Little Rock Air Force Base, AR; Dyess AFB, TX; U.S. Army Garrison Fort Belvoir, VA; and Fort Leavenworth, KS. These researchers also have investigated:

- The impacts of invasive plant species on bird communities,
- Provided guidelines to develop models of Biological Integrity based on bird communities,
- Developed and tested new acoustic technologies for monitoring remote bird populations,
- Used radar to identify military installations with significant migration stopover habitat,
- Assisted Navy with Bird Aircraft Strike Hazard (BASH) risks by analyzing strike data relative to region al vegetation height on airfields,
- Have shown that piscivorous birds are capable of moving DNA of invasive fish into regions beyond the known range extent of the species.

Researchers from ERDC's, Wildlife Team, lead research and monitoring efforts to understand the current status and distribution of the Interior Least Tern (Sternula antillarum athalassos). By collaboratively working with colleagues from the U.S. Fish and Wildlife Service and American Bird Conservancy, this species has now been recommended for delisting from ESA.

Researchers from the U.S. Army Engineer Research and Development Center, Wildlife Team, and colleagues from the U.S. Department of Agriculture, Wildlife Services, have shown that the Double-crested Cormorant (Phalacrocorax auritus) is capable of moving big headed carp DNA beyond its known distribution into the Chicago Area Waterway System.

Photo Top Left Circle: The Canyon Wren (Catherpes mexicanus) is a species detected during surveys for the Walla Walla and Fort Districts.

eDNA Webinar Recordings

1 No Fish Left Behind.

The webinar No Fish left behind: Best practices for using environmental DNA sampling to inform fish eradication efforts (US Forest Service) was recorded & has been posted at: https://www.fs.usda.gov/rmrs/events/webinars

Click here to access the site for both webinars!

2 The Aquatic eDNAtlas: A next –generation database for species assessment and monitoring.

The eDNAtlas is an online species occurrence database powered by 15,000 (and counting …) eDNA samples collected through multi-agency partnerships. In this short webinar, RMRS research fisheries biologists:

- Discussed eDNAtlas foundation, development, and new updates
- Provided a live demonstration of the tool
- Took questions and feedback

Birds Continued.

ERDC-EL wildlife researchers are the go-to source for all research and monitoring of bird communities on Department of Defense (DoD) lands. These efforts permit the USACE and the Department of the Army to meet or exceed environmental compliance objectives, especially for ESA-listed bird species. However, they also provide the vital research efforts that are needed to understand the impacts of USACE and DoD operations on terrestrial, riparian, wetland, and coastal bird communities.

Critically, the Wildlife Team has worked to study, monitor, and manage the endangered population of the Interior Least Tern (*Sternula antillarum athalassos*). These efforts, along with the USACE proactively leading management of sustainable populations of this species, have led to a recent proposal by the U.S. Fish and Wildlife Service to remove this species from ESA protection. Using the approach taken to recover the tern, ERDC-EL researchers are working similarly to recover the federally endangered Least Bell's Vireo (*Vireo bellii pusillus*) in southern California.

By working proactively to protect rare and sensitive bird species, Wildlife Team researchers are significantly contributing to the scientific knowledge and understanding that will support USACE and DoD policy and planning guidelines that also will support and maintain sustainable bird populations, reduce or minimize future ESA listings of bird species, all while promoting the USACE and DoD mission objectives on our terrestrial lands, reservoir projects, and inland and coastal waterways.

If you would like more information on working with ERDC's Wildlife Team or have a project in mind, please feel free to reach out to any of the POC's listed!

More Bird Info!

1 **Sentinel Landscapes Partnership.** Directed by award-winning filmmakers, this short-documentary tells the inspirational stories of the farmers, ranchers, conservationists, and military bases that are working together under the Sentinel Landscapes Partnership to create a more sustainable future. Founded in 2013 by the U.S. Department of Agriculture, Department of Defense, and Department of the Interior, the Sentinel Landscapes Partnership works across conventional boundaries to strengthen military readiness, conserve natural resources, and bolster agricultural economies.

Click here to access the video!

2

Maps for the Military. University of Idaho Maps of Breeding Habitat Help Military Readiness and Bird Conservation.

Click here to access the site!

Click here to access the report!

3 **Benefits of Engineered Habitats to Seasonal Bird Communities on the Savannah Harbor Navigation Project, Dredged Material Containment Areas, 1994-2012**

This report presents the results of a long-term habitat and trend analyses of bird community data from a monitoring effort conducted on five Dredged Material Containment Areas (DMCAs) from 1994 to 2012. The USACE Savannah District developed and implemented a Long-Term Management Strategy (LTMS) for the DMCAs in 1996 to mitigate lost wetland habitat due to maintenance operations in the Savannah Harbor, and to provide habitat for the floral and faunal communities that otherwise would be available if not for the urban and economic development of the area. Bimonthly surveys were conducted from 1994 to 2012 to assess the effectiveness of the LTMS to provide seasonal habitat for the bird community. Archived quarterly satellite imagery was collected and analyzed from 2001 to 2011 to assess year-round seasonal habitat availability. All bird community data collected were fitted to a negative binomial (mean abundance) or Poisson distribution (mean species richness) and used to assess trends for 180 individual species and 12 species groups for spring, summer, fall, and winter seasons from 1994 to 2012. Results indicate that the Savannah DMCAs support stable to increasing populations of most species and species groups during each season, including many species ranked as regional priority species.

National Pollinator Week

National Pollinator Week will be held from June 22—June 28 this year! Thirteen years ago the U.S. Senate unanimously approved and designated this week in June to celebrate pollinators and highlighted the urgent issue of declining pollinator populations.

For USACE facilities, here are two links for resources in improving pollinator habitat.

1 **Flowering Bee Lawns for Pollinators.**

This publication covers topics to maximize turfgrasses' friendliness to pollinators. Benefits of a flowering lawn (or spillway) include an increase in natural diversity that benefits insects and other animals.

Click here to access the site!

2 **Pollinator-Friendly Best Management Practices for Federal Lands.**

This pollinator resource provides best management practices and a plant guide for federal lands.

Click here to access the guide!

Some Interesting Reading & Viewing

Asian Giant Hornet

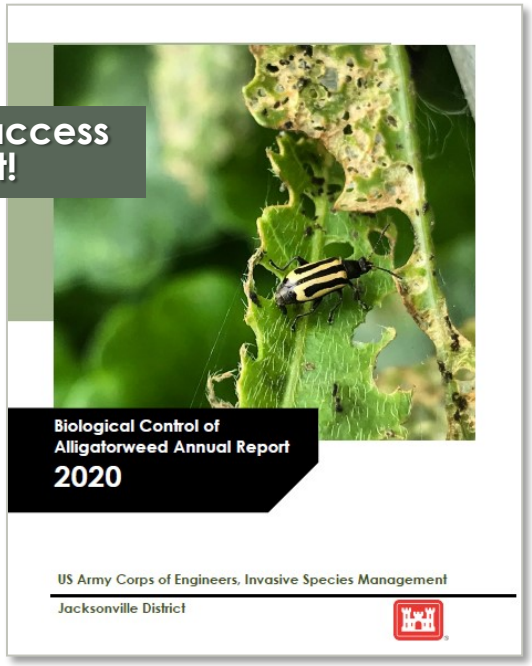
Information from Washington State Department of Agriculture.

Asian giant hornet (Vespa mandarinia) is the world's largest hornet. In December 2019, Washington State Department of Agriculture received and verified two reports of Asian giant hornet which were the first ever sighting in the U.S.

Asian giant hornet attacks and destroys honeybee hives. A few hornets can destroy a hive in a matter of hours. The hornets enter a "slaughter phase" where they kill bees by decapitating them. They then defend the hive as their own, taking the brood to feed their own young.

1 **Biological Control of Alligatorweed Annual Report!**

Click here to access the report!



2 **Results From an Evaluation of Repellency of Permethrin-Impregnated Clothing against Ticks.**

Click here to access the post!

A study conducted by researchers at the University of North Carolina at Chapel Hill and the University of Rhode Island evaluated the effectiveness of long-lasting permethrin-impregnated clothing for reducing bites from blacklegged ticks (Ixodes scapularis) among outdoor workers. Their findings showed as much as 65 percent fewer tick-bite encounters among study participants wearing the treated clothing compared to those wearing non-treated clothing.

3 **Giant Salvinia.**
Click on the link to access a great video on the infestation of Giant Salvinia at Caddo Lake.

Click here to access the video!

4 **Invasive Asian Giant Hornet Information.** *Obtained from the Armed Forces Pest Management Board*

Due to the sensationalism surrounding Asian giant hornets (murder hornets), please find the following information regarding the invasive Asian giant hornet recently found in Washington state.

- USDA-APHIS – Asian Giant Hornet New Pest Guidelines
- Washington State Department of Ag Pest Alert.
- Entomology Today post.

Click here to access the guidelines!

Click here to access the pest alert!

Click here to access the post!

5 **Climate-induced Expansions of Invasive Species in the Pacific Northwest (US).**
By Gervais et al. in Biological Invasions (2020).
This analysis focused on studies describing how climate change has already influenced, or is projected to influence, the demography, range, spread or impact of almost 400 non-native invasive species. These include both terrestrial and aquatic species that have either been documented in the Northwest or whose future invasion of the Northwest is considered inevitable.
For a brief summary see http://nwcasc.uw.edu/2020/04/16/new-nw-casc-synthesis-explores-the-effects-of-climate-change-on-invasive-species-in-the-northwest/

Click here to access the summary!

DOD PARC: Online Resources & Free Training

(Partners in Amphibian and Reptile Conservation)

1 DOD PARC Free Online Training

DOD PARC has developed seven amphibian and reptile training modules which are available on the (ECATTS) website:

- An Introduction to Amphibians and Reptiles
- Diversity of Amphibians and Reptiles in the U.S.
- Inventory and Monitoring of Herpetofauna
- Habitat Management Guidelines for Amphibians and Reptiles on DoD Sites
- Incorporating Science into the Management and Conservation of Herpetofauna
- Threats to Amphibians and Reptiles
- Venomous Snake Safety and Removal

If you complete all seven modules, email Chris Petersen (chris.petersen@navy.mil) for a certificate from DoD PARC!

To access the training please follow the instructions below. This free training is available to all Navy, Marine Corps, Air Force and Army personnel with a .mil email address and DoD contractors. **If you need any assistance accessing the ECATTS site, email Sarah Spalding at support@ecatts.com.**

IF YOU ALREADY HAVE AN ECATTS ACCOUNT

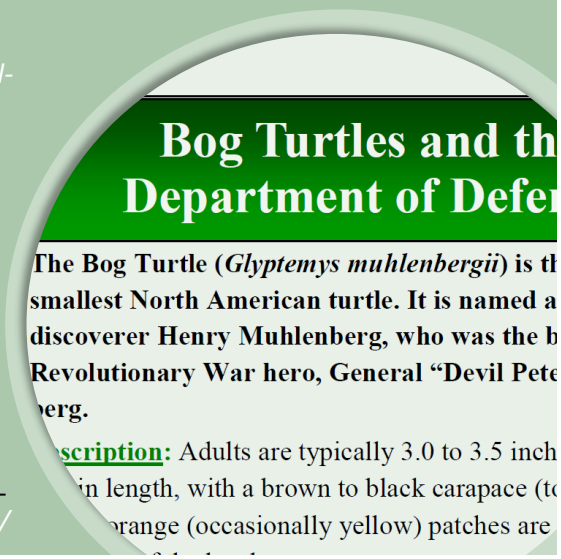
- Log into your ECATTS account at https://environmentaltraining.ecatts.com
- Go to the **All Available Training** link in the center of the home page
- Click on the "+" in front of the tab for **Military Base Employee or Related Personnel**
- Click on the "+" in front of **the Natural Resources** category
- Click on the **Amphibian and Reptile Training** category
- Access each module by clicking on it

TO CREATE A NEW ACCOUNT

- Go to the ECATTS website: https://environmentaltraining.ecatts.com/
- Enter the registration password "navfac" into the box in the center of the page that says REGISTRATION PASSWORD -this is located within the NEW USERS-Register Here box.
- Fill in the fields on the Account Registration Form. Here you will choose your unique Login ID and password
- Under TRAINING TYPE, select DoD Training (selecting DoD Training will simplify the registration process and will disable access to normal ECATTS training except for Amphibian and Reptile modules)
- Finish the account registration form and click REGISTER
- Once your registration is complete, you will find the Amphibian and Reptile Training under the tab that says TRAINING PLAN

2 DOD PARC Online Resources—10 Things To Do From the Office or Home!

- Download and read one of 45 amphibian and reptile species Fact Sheets *(https://www.denix.osd.mil/dodparc/parc-resources/)*
- Scroll through DoD PARC's amphibian and reptile Photo Website and consider submitting your own photos for the PARC network to use. *(https://dodparcphotolibrary.shutterfly.com/)*
- Listen to the first DoD PARC Podcast. *(https://youtu.be/seAdTBMtTbg)*
- Watch the 2019 Snakes and Safety on Continental U.S. Department of Defense Installations video. *(https://www.youtube.com/watch?v=iCaXqgYGoLo&feature=youtu.be)*
- Read DoD PARC's 2019 Snake Fungal Disease Survey Report *(https://www.denix.osd.mil/dodparc/parc-resources/dod-parc-reports/final-report-legacy-project-17-838-dod-snake-fungal-disease-survey-natural-resources-manager-training-and-data-collection/)*
- Download a free copy of PARC's Inventory and Monitoring Guide *(https://parcplace.org/species/inventory-and-monitoring/)*
- Take one of seven DoD PARC free online Training Modules *(https://environmentaltraining.ecatts.com/home)*
- Brush up on your Frog Calls *(https://www.pwrc.usgs.gov/frogquiz/index.cfm?fuseaction=publicQuiz.StartPublicQuiz)*
- Send any recent herp survey data or reports to chris.petersen@navy.mil for inclusion into the DoD PARC Herp Database
- Update your INRMP amphibian/reptile section following our INRMP Guidelines *(https://www.denix.osd.mil/dodparc/parc-resources/policy-guidance/*


Bog Turtles and th
Department of Defe
The Bog Turtle (*Glyptemys muhlenbergii*) is th
smallest North American turtle. It is named a
discoverer Henry Muhlenberg, who was the b
Revolutionary War hero, General "Devil Pete
berg.
scription: Adults are typically 3.0 to 3.5 inch
in length, with a brown to black carapace (to
orange (occasionally yellow) patches are