

The Forum

NEW YORK STATE WETLANDS FORUM NEWSLETTER

CONTENTS

DEC Revises Endangered Species Act Regulations	1
Message from the Chair	2
Botanical Discovery	4
Update on Upcoming Changes to National Wetlands Plant List.....	4
The Competing Interests of Wetlands and Airplanes	5
Call for Papers.....	5
Wetlands Wordfind	6
Journals from the Field- Part II Chain of Action	7
Scholarship Committee Formed	7



Drawing by Kurt Weiskotten

DEC REVISES ENDANGERED SPECIES ACT REGULATIONS

On November 3, 2010, the Department of Environmental Conservation adopted revisions to the State Endangered Species Act (ESA) regulations (6 NYCRR Part 192). Undoubtedly, the revisions made significant changes to the ESA regulations, but whether the revisions clarified the DEC's past practices, were consistent with the ESA under the Environmental Conservation Law (ECL Article 11) or created a new set of ambiguities, is up for debate. Therefore, with the two articles below, we are providing this Forum for a discussion of how the revised regulations have clarified the ESA or, in contrast, how the revised regulations only create concerns for the regulated community.

PRO

— Kevin R. Bliss

The New York State Department of Environmental Conservation (DEC) on November 3, 2010 adopted revisions to the State Endangered Species Act. The intent of this new legislation is to strengthen protections for endangered and threatened species and to provide developers, local officials and others with what the DEC considers a clear regulatory framework. On August 5, 2010 , the DEC officially announced these changes in draft form pursuant to its general powers under Environmental Conservation Law (ECL) Article 3 and pursuant to specific authority under ECL § 11-0535 (the State Endangered Species Act) as well as court decisions interpreting the Department's authority under that statute. A public comment period ensued, ending September 20, 2010. The final regulations are available on the DEC public web site: <http://www.dec.ny.gov/regs/3932.html>.

The regulations establish procedures and standards for reviewing permit applications for construction projects and other projects that might impact endangered and threatened species. Actions that might result in the "incidental take" of an endangered or threatened species must complete a DEC permitting process before going forward. ("Incidental take" meaning any taking of a species listed as endangered or threatened in section 182.5 of the Act and otherwise prohibited by section 11-0535 of the Environmental Conservation Law that

CON

— Kathleen M. Bennett and Kristy B. Frame

The New York State Department of Environmental Conservation's (DEC) revisions to the State Endangered Species Act were intended to clarify the existing law and provide a clear regulatory framework by defining Incidental Take Permit requirements and procedures, as well as providing standards and defining key terms. While the new regulations may clarify certain parts of the past regulations, they suffer from ambiguities, fail to clearly define standards, or take into account certain practical considerations.

The new regulations contain definitions that are overly broad and/or fail to establish clear standards or criteria. For example, the type of "activity" that will require an Incidental Take Permit includes "any land use, construction or action." Based on the definition, *any* land use whatsoever will trigger the Incidental Take Permit. The State Environmental Quality Review Act already requires the assessment and mitigation of impacts on endangered or threatened species when undertaking "construction" or "action." This renders the permit/mitigation requirements applicable to "construction" or "action" duplicative. Also, expanding the types of activities that will trigger an Incidental Take Permit to include "any land use" gives the DEC the ability to regulate projects and land uses that have already been permitted and approved. Giving the DEC such broad regulatory powers will deter any development because no project owners/developers will subject themselves to the time

New York State Wetlands Forum

Board of Governors

Melissa Toni, *Chair*
Federal Highway Administration

Frances Reese M.S., *1st Vice Chair*
Joseph C. Lu Engineering and Land Surveying, PC

Michael Fishman, *2nd Vice Chair*
GHD, Inc.

Stephanie Wojtowicz, *Treasurer*
NYS Department of State-Division of
Coastal Resources

Kevin R. Bliss, *Secretary*
NYS Department of Environmental Conservation

Board Members At Large

Kathleen M. Bennett, Esq.
Bond, Schoenck & King, PLLC

Kevin M. Bernstein, Esq.
Bond, Schoenck & King, PLLC

Charlotte Brett
Kadrmas, Lee & Jackson, Inc.

Johanna Duffy
Barton & Loguidice, P.C.

Edward Frantz
NYS Department of Transportation

Peter B. Gibbs
Natural Resources Conservation Service

Joseph McMullen
Terrestrial Environmental Specialists, Inc

Anne Secord
U.S. Fish and Wildlife Service

Virginia (Ginger) L. Ursitti, QEP
Watts Architecture & Engineering, PC

Kurt Weiskotten
NYS Thruway Authority/Canal Corporation

Elizabeth A. Seme, Inc., *Administrative Assistant*

Electronic Account Manager

Heather Otis

Forum Newsletter Staff

Editor

Kevin M. Bernstein

Typing and Layout

Katharine Moody

Proofreading

Jennifer Daly

Mission:

The New York State Wetlands Forum is a non-advocacy corporation comprised of individuals and groups with diverse backgrounds, interests and viewpoints regarding wetlands and their science, use and management. Incorporated in 1994, the Forum is a 501(c) (3) not-for-profit organization. Its purpose is to improve communication among people interested in wetlands; call attention to and objectively discuss local, statewide, regional, national and global wetland issues as they relate to New York State; improve its members' knowledge and understanding of wetlands; and, make available information about wetlands to its members and the general public.

MESSAGE FROM THE CHAIR

The Forum's Board of Governors has a great deal of news to share in this Fall Newsletter.

First, a look back. In September, we held a Training Course on the "Northeast Region Supplement to the 1987 USACE Wetland Delineation Manual" in Utica. The course was a great success, with about 100 attendees. The Corps of Engineers taught the class alongside some of the best NRCS soil scientists in our area. These instructors did an absolutely fantastic job. Students of the course have told me that it was one of the best training sessions they've attended in a long time. Congratulations to the Board Committee, USACE instructors, and NRCS instructors!



Melissa Toni

Second, a look forward. We're in the middle of planning our Annual Conference, to be held on April 13 and 14, 2011 at the Crowne Plaza in Lake Placid. We typically have a record number of attendees in Lake Placid and we look forward to a great event at this location once again.

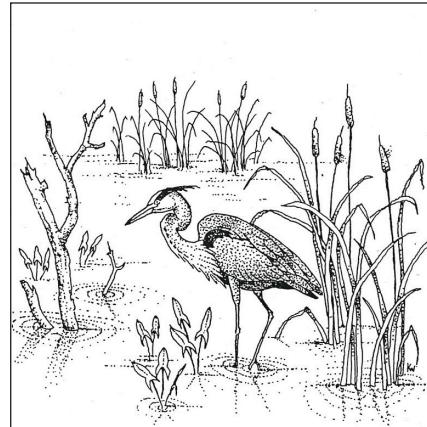
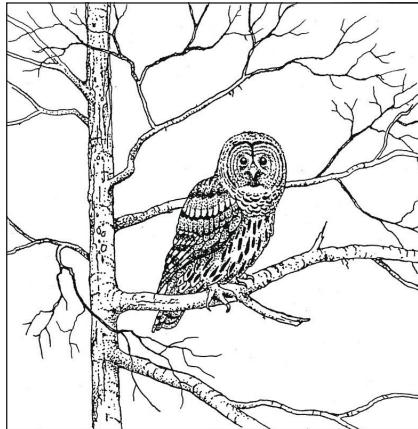
The layout of the conference will remain the same as past years. The first day will be a series of breakout sessions on wetland-related topics, and the second day will be a morning of legislative updates followed by several great field trips. We are currently looking for speakers. The Call for Papers is included in this newsletter.

New this year: We are encouraging students to attend the Annual Conference. Several employers have regular internships and they are looking for students to come and try out their company or agency. This conference could be a great networking opportunity for those who will be seeking jobs in the near future. We are offering a waived registration fee for students who present in our special Student Session or submit a poster for the Student Poster Session.

Also new this year: We will be featuring a Quiz Bowl-type game in the Crowne Plaza's beautiful lobby/bar area. More details will follow in the next newsletter. Start studying those Latin names.

I look forward to reading your abstract submissions for the Annual Conference. Please enjoy the articles in this newsletter that our Board of Governors, Members and Guests have contributed. Cheers!

Melissa Toni, Chair



DEC RELEASES REGULATIONS TO STRENGTHEN, CODIFY ENDANGERED SPECIES ACT

PRO [continued]

is incidental to, and not the intended purpose of, an otherwise lawful activity.) Incidental Take Permit applicants must develop a mitigation plan that results in a net conservation benefit to the listed species.

Contents of the mitigation plan shall include: (1) Acceptable measures the applicant will undertake to minimize and fully mitigate impacts to any associated species listed as endangered or threatened; (2) Data and information to ensure that the taking sought to be authorized will not reduce the likelihood of the survival or recovery of the species, the biotic community of which the species is a part, and the habitat for the species' continued existence in New York; (3) A proposed method for monitoring compliance with the effectiveness of the plan; and (4) A description of the funding source, the level of funding, and the guarantee or assurance of funding that the applicant will provide to implement the endangered or threatened species mitigation.

Anyone proposing or overseeing an activity may request a determination from the DEC as to whether the activity is likely to result in the taking of any species listed as endangered or threatened. At a minimum, the request must contain a description of the activity being proposed and the location of the proposed activity. Within 30 days the department must provide a written answer to the person making the request stating whether the proposed activity is subject to regulation. Alternatively, the DEC may request additional information necessary to make such a determination, including any factors requiring an extension of the 30-day time period.

It should be noted that the previous regulations at ECL § 11-0535 did already require a permit for any “taking” of threatened or endangered species. However, the prior regulations did not explain when a permit is required, how to apply for a permit, or timeframes or procedures for DEC review of permit applications. Nor did they provide standards and criteria for DEC to review permit applications. Likewise, some key terms were left undefined. For that reason, the Department argues the new regulations simply clarify the existing law, rather than impose a new regulatory burden on developers, forestland managers, and other landowners. That said, under prior administrations, the DEC admittedly did not fully exercise its endangered species authority pursuant to ECL Article 11. Rather, endangered and threatened species issues were generally handled through the State Environmental Quality Review Act (“SEQRA”). Recall, this law requires the reviewing agency to certify (for those actions deemed of a potentially significant adverse impact) that “consistent with social, economic and other essential considerations from among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable.”

The NYS Wetlands Forum will hopefully include a speaker on this subject at our annual conference, already scheduled for the Crowne Plaza in Lake Placid, NY this April 12 - 14, 2011. Additional information on the Endangered Species Act amendments, including DEC’s assessment of public comments, may be found in the New York State Register, November 3, 2010 issue: <http://www.dos.state.ny.us/info/register/2010.html>.

CON [continued]

and expense of the permitting process when they may be subjected to regulatory restrictions in addition to those established by the permit they received – they will simply go elsewhere.

Also, the new regulations require the DEC to determine there is a “net conservation benefit” to the endangered or threatened species before issuing an Incidental Take Permit. An “activity” has a “net conservation benefit” when any contribution or enhancement benefits the species or its habitat to a greater degree than if the proposed activity were not undertaken. Under the new regulations, mitigation of potential negative effects is insufficient – an applicant must demonstrate its land use will actually benefit the endangered or threatened species. This standard will be nearly impossible for most proposed activities to meet.

Moreover, the new regulations fail to provide any substantive guidelines for determining what constitutes a “net conservation benefit.” An Incidental Take Permit applicant is subject to the discretion of the Regional Permit Administrator who has no clear criteria for determining whether the applicant has shown a “net conservation benefit.” The DEC’s failure to provide any guidance with respect to what constitutes a “net conservation benefit” will result in arbitrary permit denials.

Also, the new regulations protect “occupied habitats.” An “occupied habitat” is a geographic area within which a species listed as endangered or threatened has been determined by the DEC to exhibit one or more essential behaviors. This definition allows the DEC to designate larger than necessary areas as “occupied habitats” thereby requiring any project/development in those areas to comply with the Incidental Take Permit and mitigation requirements. “Occupied habitats” should be limited to specific areas within the geographical area occupied by the species. This limited definition would recognize that protecting the entire geographic area an endangered or threatened species may occupy is neither prudent nor practical.

In addition, the mitigation plan requires the applicant disclose the funding source, level of funding, and guarantee or assure the funding necessary to implement the mitigation plan. As notices of incomplete permit applications are already regularly issued, adding this requirement to the permit process only ensures that additional notices of incomplete applications will be issued as applicants may have a problem meeting the requirements to the DEC’s satisfaction. Accordingly, even more projects may be delayed or never started.

Further, the new regulations may render large areas of mining land useless. The new regulations expressly exempt “existing, routine and ongoing agricultural activities.” It can be inferred that this exemption is necessary because agriculture is dependent upon having arable land and enforcing the new regulations would render large amounts of land useless. Unfortunately, the DEC did not take into account that the same issues apply to the mining industry. The mining industry is dependent upon lands that have mineral deposits and having the new regulations enforced against the mining industry could also render substantial portions of land useless.

The foregoing is only a few examples of the over breadth and ambiguity of the new regulations. While the new regulations may have clarified the existing law in some ways, they are so broad and ambiguous that they create a new set of onerous problems. Promoting development and protecting the environment are not mutually exclusive; however, the new regulations, in their present form, run the risk of stifling any development in the State of New York.

BOTANICAL DISCOVERY

— Johanna E. Duffy

Have you ever walked around a wetland area and encountered a plant that you have never seen before? This article serves to profile an example of such a plant - closed bottle gentian (*Gentiana andrewsii*).

Closed bottle gentian is classified as a facultative-wetland (FACW) plant (Reed Jr., 1988). Common habitats where closed bottle gentian can be found include openings in floodplain forests, moist shaded sites, thickets, fens, and swampy areas near bodies of water. This plant often occurs in calcareous soil and is a big fan of humus-rich, slightly acidic, sandy loams.

The New York State Department of Environmental Conservation's list of Protected Native Plants (ECL 193.3) identifies closed bottle gentian as exploitably vulnerable. This is a non-rare plant protection category that, by current definition, is supposed to signify which plant populations are likely to become threatened in the near future throughout all or a significant portion of their range within the state. Since many of the species currently included on this list do not meet the current definition, efforts are reportedly underway to either change the definition of 'exploitably vulnerable' or to make modifications to the listed plants (New York Rare Plant Status List, Young, 2010).

In the field, the closed bottle gentian plant is typically 1-2 feet in height with lanceolate or ovate, sometimes purplish, leaves in a whorled or opposite arrangement. Clusters of blue to purple flowers can be found just above the leaf locations. These flowers are described as bottle-like, cylindrical, and are 1-1.5 inches long. The interesting feature about these flowers is that they remain closed, even in full bloom and even when they are ready to receive pollinating insects (primarily bumblebees). The flowers are often likened to a bud about

to open. The color of the corolla, or whorl of petals, will assume different shades of violet depending on the maturity of the flower. In addition to the color, the outer edges of the corolla have longitudinal ridges which give the flower a wrinkled appearance. Closed bottle gentian blooms late summer to early fall, lasting about a month.

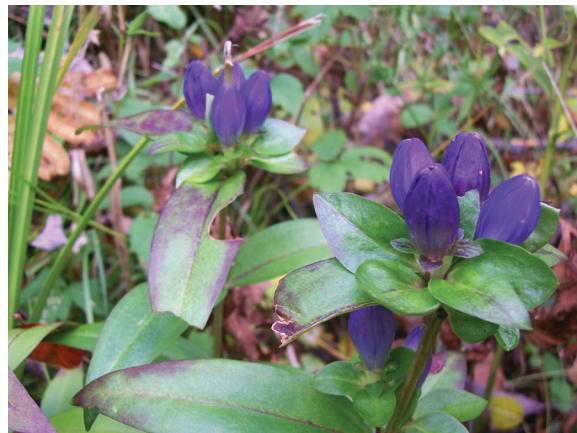
According to the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Plant Database, closed bottle gentian has been documented in multiple counties within New York State, as far south as Suffolk County, as far west as Erie County, as far north as Clinton County, and as far east as Rensselaer County. The one area in New York State where this plant is not extensively documented is within the Adirondack Park. So the next time you're in the woods taking a walk, make sure to bring a camera. You never know when you may happen upon a striking and unidentifiable botanical specimen – possibly even a small population of closed bottle gentian.

Sources:

- Hilty, John. September 2010. Prairie Wildflowers of Illinois.
www.illinoiswildflowers.info/prairie/plantx/bt_gentianx.htm
- Reed Jr., Porter B. 1988. National List of Plant Species that Occur in Wetlands.
- Young, Steve (editor). June 2010. New York Rare Plant Status List.
www.dec.ny.gov/docs/fish_marine/pdf/2010rareplantstatus.pdf
- NYSDEC. Part 193: Trees and Plants – Page 2. www.dec.ny.gov/regs/15522.html.
- USDA. NRCS. Plants Database. Plants Profile – *Gentiana andrewsii* Griseb.
www.plants.usda.gov/java/profile?symbol=G_EAN&photoID=gean_003_avd.tif
- Lady Bird Johnson Wildflower Center. September 2010. Native Plant Database – *Gentiana andrewsii*.
www.wildflower.org/plants/result.php?id_plant=gean



Johanna Duffy; Litchfield County, CT



Johanna Duffy; Oswego County, NY

UPDATE ON UPCOMING CHANGES TO NATIONAL WETLANDS PLANT LIST

— Joseph M. McMullen

As most of you know the wetland indicator plant list is undergoing a major revision. I provided details of the process in an article in the Summer 2010 issue of *The Forum*.

Robert Lichvar of the U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory is the Director of the National Wetland Plant List. Bob informed me at the time of this writing (November 1) that the Federal Register notice announcing the list was circulated to all agencies by the Office of Management and Budget. As of October 22, when the Office of Management and Budget closed the internal federal agency announcement, there was only one minor comment.

According to Bob, the notice is scheduled to be posted in the Federal Register. The date of the posting is determined by personnel who run the Federal Register, based on the size of the notice and available space. He expects it within the next few weeks.

Once the notice is posted, there will be a 60 day review and comment period. Votes can be cast and comments provided as to the recommended indicator status of a given species. This will be an on-line voting process accessed at the following web site: <https://rsgis.crrel.usace.army.mil/apex/f?p=703>.

THE COMPETING INTERESTS OF WETLANDS AND AIRPLANES

— Tina Fricke

As all of us are aware, one of the reasons why wetlands are valued is their ability to create habitat for many species of wildlife. Unfortunately, wildlife can create conflicts with many of our preferred modes of transportation. This is especially evident in air travel, as airplanes compete with various species of birds for the same airspace.

In recent years, the Federal Aviation Administration (FAA) has been increasingly concerned with wildlife accidents (referred to as “strikes”) at airports. The FAA has taken steps to minimize the potential for wildlife strikes, and these efforts have increased since the Hudson River incident, when Captain “Sully” became a national hero by safely landing his plane when it was brought down by a flock of Canadian geese.

One of the most common ways the FAA uses to reduce the potential for wildlife strikes at airports is to minimize the amount of wildlife habitat on airport property. The FAA’s Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants on or near Airports*, identifies what the FAA considers to be “hazardous wildlife attractants” and what airports should do to minimize the impacts these habitats have on their airports. Among the potential hazards that are identified are wetlands or areas of open water.

The existing FAA guidance states that airports should minimize or reduce hazardous wildlife attractants located within 5,000 or 10,000 feet of an airport, depending on the types of planes each airport serves. Additionally, if there are any hazardous wildlife attractants located within 5 miles of an airport that could cause wildlife to cross the approach or departure surfaces used by aircraft, the FAA recommends analysis to determine if there is a way to minimize the impact of that hazard.

Nationally, commercial service airports are required to complete wildlife hazard assessments and develop wildlife hazard management plans. Currently, some FAA offices are requiring a “wildlife hazard site visit” be conducted as part of the NEPA (National Environmental Policy Act) process for any airport (commercial service or general aviation) proposing improvements involving a federal action. This involves having a qualified airport wildlife biologist conduct a visit or multiple visits to the airport to identify wetlands or other potential wildlife hazards on or adjacent to airport property. If hazards are identified, it is generally recommended that they be removed if the airport wants to continue to receive federal funding.

One office oversees over 100 airports in North and South Dakota, less than 12% of which are commercial service airports with the remainder identified as general aviation. As a result of site visit recommendations, certain airports in North and South Dakota are being required to remove any wetlands located on the existing airport property. Since the removal is done as part of the federal NEPA process, all of the wetland impacts must be mitigated, but wetland acreage on airport properties located in the prairie pothole region can add up quickly.

One airport in South Dakota, located squarely in the prairie pothole region, has 120 acres of wetlands located on and immediately adjacent to the airport property that are identified as potential wildlife hazards. Because the airport receives federal funding and has to be in compliance with the FAA’s grant assurances, the airport is required to show that it is taking measures to eliminate the wetlands on its property. While improving public safety conditions, removing such a large acreage of wetlands in a region estimated to have already lost more than 50% of its wetland resources raises new concerns.

The FAA is currently updating its guidance pertaining to wildlife hazards; it is expected that the updated guidance will be complete in 2011. While not finalized, some preliminary information indicates that under the new guidance, all airports that receive federal funding – not just commercial airports – may be expected to complete some sort of wildlife hazard identification and analysis to determine what, if any, measures should be taken to reduce hazards on their property. It is uncertain if the new guidance would be implemented across the country in the same manner as it is currently being implemented in the Dakotas. But with nearly 3,400 existing and proposed airports in the nation identified by the FAA as eligible for federal grants, the potential effects of the updated guidance could be significant to our nation’s wetlands.

CALL FOR PAPERS

New York State Wetlands Forum, Inc.
2011 Annual Conference and Meeting

April 13 & 14, 2011

Sustaining Wetlands in Changing Times

Crowne Plaza Resort & Golf Club
Lake Placid, New York

877-570-5891; <http://www.lakeplacidcp.com>

The 17th annual Spring Conference and Business Meeting of the New York State Wetlands Forum will once again examine an interesting variety of wetland-related issues and developments. Presenters are sought for these breakout session topics and other topics of interest to you:

- Wildlife and Transportation
- Marcellus Shale Natural Gas Extraction
- Wetland Mitigation and Banking
- Water Quality Issues
- Wetland Restoration Methods
- Plant Identification
- Techniques in Stream Restoration
- Endangered and Threatened Species
- Interim Regional Supplement
- Invasive Species
- Adirondack Issues
- Student Session

As always, presenters receive a discounted registration fee. Student presenters are eligible for a registration fee waiver.

THIS IS YOUR MEETING: Make it even more interesting by presenting the work or projects you are involved in. If you have an idea for a field trip, or would like to host one, please e-mail or mail your idea to Anne Secord (address below).

ABSTRACT SUBMISSION: Please submit your presentation abstract for consideration. Abstracts must include the title, author(s), address(es) and a concise description of the topic in 250 words or less. Please use the following format:

TITLE. Author 1 and Author 2 . Address 1, phone number, fax number, email address. Address 2 . Abstract. Audiovisual needs.

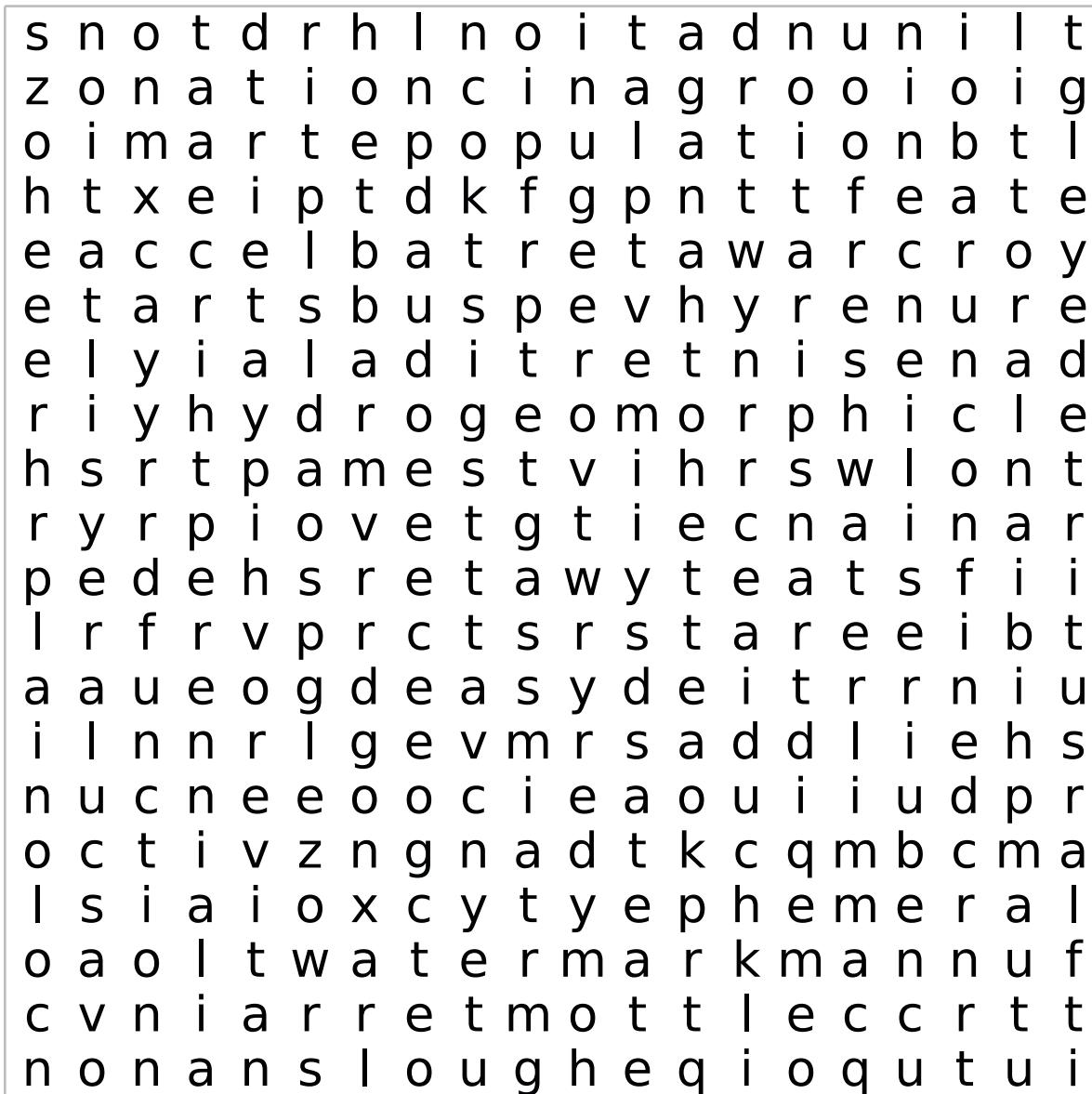
Submit an abstract via e-mail or mail to: Anne Secord, U.S. Fish and Wildlife Service, 3817 Luker Road, Cortland, New York 13045; Email: anne_secord@fws.gov; Phone: 607-753-9334; Fax: 607-753-9699

DEADLINE: January 21, 2011

EXHIBITOR/SPONSOR: Exhibitors and sponsors have the opportunity to promote their goods and services to conference participants via floor and table space displays. Sponsorship displays in the conference program are welcomed. Space is limited, so please reserve now by returning the registration form or by contacting: Kevin Bernstein at Bond, Schoeneck & King, PLLC, One Lincoln Center, Syracuse NY 13202, Kbernstein@bsk.com, (315) 218-8329

For Conference and Meeting Updates please visit <http://www.wetlandsforum.org>.

Wetlands Wordfind



Amphibian
Diversity
Freshwater
Hydrology
Littoral
Native
Preservation
Reference
Slough
Transpiration
Vegetation
Zonation

Colonial
Ecosystem
Function
Intertidal
Lotic
Organic
Prey
Resilience
Substrate
Turbidity
Water Table

Decay
Ephemeral
Gleyed
Inundation
Macrophyte
Perennial
Quadrat
Sediment
Taxa
Unconfined
Watermark

Detritus
Facultative
Hydrogeomorphic
Karst
Mottle
Population
Reach
Siltation
Terrain
Vascular
Watershed

JOURNALS FROM THE FIELD - PART II CHAIN OF ACTION

Flowing water swirls an iridescent rainbow upon its surface. Though beautiful and shimmering, the floating oil is a disheartening sight. Looking around, my heart drops with the scene of stunted *Spartina*, green algae turned brown and brittle on the edge of desiccated pools, and a bleak grave of all that was marsh life. It is not only my eyes that see this unsettling scene. I can smell the pungent odor of sewage and rotting vegetation; I can hear the buzz of thousands of mosquitoes and the lack of bird life; and I can feel the overall emptiness of this marsh. This marsh, in all its hurt and abandonment continues to struggle in order to stay alive.

For centuries, these productive lands have been exploited and developed, sometimes beyond repair. This marsh, in which I stand alone today, has seen the pressures of ditching, tidal restrictions, wetland filling, and stormwater runoff—all of which have changed its natural hydrology.

Creeks meander across the marsh in fluid bends carrying nutrients, organic material, and animal life into the marsh—they are the living veins bringing to life the soul and existence of this marsh, but still it struggles to preserve its energy source. Ditches have been created by man and drain the lifeblood out of this marsh. To drain, to abandon, to discard, to leave—all are eerie synonyms for the seemingly innocent phrase ‘to ditch’. I gaze at the water pulsing in circular motions as the tide retreats from the marsh creeks and ditches, and can’t help but reflect on the path this marsh has taken through history.

Finding salt marshes a useful resource for the feeding of their cattle, colonial settlers were the first to actively manipulate these flat expanses of land. Early settlers discovered that ditches could successfully reduce the amount of tidal inundation on the marsh

—Stephanie Wojtowicz

surface, which in turn facilitated the growth of *Spartina patens*, a highly nutrient, tasty, and valuable grass. Later as farming equipment became more mechanized, farmers moved off the marsh into more tillable land, but the marshes, unfortunately, did not see the end of destructive ditching.

More recently, in the early–mid 20th century, marshes were perceived as unproductive, barren, and bleak mosquito infested lands. So, fueled by public pressure, resource managers had to face complaints and real issues dealing with extreme mosquito populations. The solution? Ditches. Ditches were dug deeper to drain the marsh of pooling water, which, in some peoples view, would reduce the mosquito population. Unfortunately, this practice drained the marsh of too much water and the marsh could no longer sustain populations of predatory fish. With the lack of principal predators like *Fundulus heteroclitus*(mummichog) and *F. majalis*(striped killifish) mosquito populations soared out of control. Surface draining also affected pools and pannes which supported other important insects and aquatic vegetation. No longer could native salt marsh species survive, for there was too much influx of freshwater. Invasive species like *Phragmites australis*(common reed) and *Lythrum salicaria*(purple loosestrife) invaded the marsh and successfully established large healthy stands unable to provide sufficient nutrients or appropriate habitat to marsh dependent species.

Slowly, waterfowl and marsh dependent bird sightings dwindled; fish could no longer breed or feed on the marsh; mosquito populations exploded; and marsh habitat was changed forever. Human development had drastically altered the face of the living marsh. We built highways and railroads that

divided the marsh in two, separating them from tidal flow and causing increased storm flooding. Pollution from stormwater runoff, excess sedimentation, erosion, light and sound all altered wildlife and bird behaviors, and changed the dynamic interplay of the salt marsh.

To what seems to be the benefit of our own progress, humans have found ways to alter our world since the beginning of time. We have ditched marshes to control the growth of saltmeadow grass, we have ditched marshes to control mosquito populations, and we have ditched marshes to control water levels. Control—*CONTROL*. This word lingers in my thought. With our minds and machines we have created a society that desperately tries to control nature and a tension between nature and society has now formed as a result. Head to head we have come, pulling in different directions to achieve our goals: one of development and advancement, the other mere survival.

Each action has a reaction and is fed into a never-ending loop of consequence. Unwittingly, we modified an ecosystem and put in motion a series of unfortunate events. We drained water from the marsh in order to reduce mosquito populations→ open water habitat was lost→ native vegetation struggled and healthy stands died→ invasive species established→ predatory fish populations decreased→ mosquito populations increased. A loop we did not foresee when the first ditch was dug has come full circle and we face the consequences today.

Our actions today can create a loop of continual change because we have the advantage of looking to our past. I don’t think we should look at our future as a downward spiral from which we can never be released. Our future is a chain, and by acknowledging the loop made by our past actions we can build a positive link in which to further our never ending chain of understanding and knowledge.

SCHOLARSHIP COMMITTEE FORMED

The New York State Wetlands Forum is happy to announce the creation of the Student Scholarship Committee. The NYSWF, understands the growing need to support students while they pursue their education in the realm of wetland and environmental science. The newly formed Scholarship Committee will develop a scholarship program, including eligibility criteria, scope of scholarships, and application processes to provide financial support to qualifying students. The NYSWF is proud to be able to provide this support to students so that we may continue to have the best and brightest enter the field! The scholarship program will help implement core components of the New York State Wetlands Forum mission -- improve communication; improve knowledge and understanding of wetlands; and make available information about wetlands to its members and the general public.

The Forum

A publication of

NEW YORK STATE WETLANDS FORUM, INC.
POST OFFICE BOX 1351
LATHAM, NY 12110-1351

Presort Std.
US Postage
PAID
Permit No. 30
Latham, NY 12110

CALL FOR PAPERS
2011 ANNUAL CONFERENCE
AND MEETING
APRIL 13 & 14, 2011
SUSTAINING WETLANDS IN
CHANGING TIMES
LAKE PLACID, NEW YORK

SEE INSIDE FOR DETAILS!