

# RUTGERS UNIVERSITY EQUINE SCIENCE QUARTERLY



From Our Stable To Yours

Summer 2015

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## Saying Goodbye To A World-Renowned Horse: The amazing life and history of Lord Nelson



Lord Nelson with Karyn Malinowski at the 2012 State 4-H Horse Show.

**L**ord Nelson will be remembered as Rutgers University's only equine professor emeritus, something that most people will read and wonder how a horse could teach, let alone be a professor. But for Rutgers' favorite equine, this was just a page in his life's novel. Living a distinguished life, full of adventure, Nelson lived to an age that is rarely seen in the equine world. Right up until the ripe age of 42 (the human equivalent of 126 years) Nelson was actively exploring the world around him, and touching the lives of everyone he met.

Purchased in the summer of 1978 from Roosevelt Sales Stables in Edison,

New Jersey, Nelson was believed to be five years old and from a Quarter Horse ranch in Oklahoma. He was selected as one of the first horses of what would soon make up the Rutgers University Police Department Mounted Patrol unit.

Nelson would commute daily to New York City where he trained with some of the best, the New York Mounted Patrol. New York's mounted unit, established in 1871, is still one of the largest in the United States. They have kept their mounted unit around all of these years because of the effectiveness of having horses on the force. Horses are known to not only be able to maintain police

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**RUTGERS**

New Jersey Agricultural  
Experiment Station

# From The Clubhouse



Looking forward to  
upcoming events -  
there are so many  
ways to visit with  
the Equine  
Science Center

Dearest Friends,

Another group of outstanding students have graduated from SEBS since we “spoke” last. Congratulations and Best Wishes to all of them. We will miss you but please don’t forget about us here at the Equine Science Center. I’ve just returned from my fourth and last visit to Ireland as the external examiner for the Equine Science Program at the University of Limerick.

While I was there I took an extra few days of holiday to tour this most beautiful country. A highlight of the trip was a private tour of the fabulous *Coolmore Stud* and to actually touch the world’s most influential Thoroughbred stallion Galileo! I also crossed something off of my bucket list – I sat behind a piebald pacer!

We at the Center have been busy these past few months. *Ag Field Day at Rutgers Day* turned out to be a glorious day and we paid tribute to the great Lord Nelson in the treadmill barn. It was nice to see so many long-time friends and alumni who stopped by for a visit. Our students and volunteers were busy placing tattoos on young, aspiring equine enthusiasts and selling, Lord Nelson beany babies and

other promotional items. Out of all things going on at Rutgers Day in New Brunswick, the *Star Ledger* chose to focus its coverage on the equine exercise physiology lab and a photo of Ph.D. student Dylan Klein and one of our new research horses, *Gentleman Start Your Engine!* Several days later the Center was the focus of a review and visit from the Board of Managers, the oversight and advisory board to the New Jersey Agricultural Experiment Station.

The *Jersey Fresh, Three-Day Event* at the Horse Park of New Jersey was where one could find us the weekend of May 9-10. RUBEA vice-chair, Liz Durkin, hosted a table on behalf of the Center in the VIP tent, where we had the pleasure of watching stadium jumping up close with a group of Center friends and donors. Thanks Liz! Carey Williams, the Associate Director for Extension Outreach, was busy the entire week assisting the Jersey Fresh committee in a multitude of tasks.

We all then traveled to Florida to the Equine Science Society meetings the last week of May. Dr. Williams found out that she would be receiving the American Society of Animal Science – Equine Science Award. Congratulations Carey, you certainly make us proud! Take a look at her feature story on [page 4](#).

Summer is NEVER quiet around here. Our Summer Showcase, held on July 8 was a success. My thanks to all who participated. I hope we cross paths at some of the future events we either will be hosting here on campus or at other venues around the state. It’s never too late to put some of our upcoming events on your calendar. Carey and I will be lecturing at this year’s *Hambletonian Veterinary Conference* and the Center is putting on a symposium entitled, “Legal, Business, and Insurance Issues Impacting the Equine Industry” on October 12. Stay tuned for details!

Best,  
karyn



# PARTNERS



New Jersey Farm Bureau's primary purpose is to represent the overall interests and improve the financial well-being of farmers and our \$800 million industry. NJFB activities are supported through voluntary membership and annual dues. Members have access to:

- Staff assistance on farming issues and regulatory problems.
- Educational workshops on topical issues such as farm labor, wildlife damage, and zoning.
- Weekly updates on legislation news and regulations affecting all aspects of farming.

It pays to be a NJ Farm Bureau member! For a full list of membership levels and benefits, or to sign up, visit: [www.njfb.org](http://www.njfb.org).



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In addition, owning over 810 acres of land for the development of new sites. It is our mission as a company to provide the best quality affordable home for the hard working residents of Pennsylvania.

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The New Jersey Department of Agriculture (NJDA) is an agency which oversees programs that serve virtually all New Jersey citizens. One of the Department's major priorities is to promote, protect and serve the Garden State's diverse agriculture and agribusiness industries.

In addition to the programs we offer to support production agriculture, NJDA also manages programs that feed schoolchildren, distribute surplus federal foods to soup kitchens and pantries that serve our needy citizens, conserve precious soil and water resources, protect farmland from development and preserve it for future agricultural use, expand export markets for fresh and processed agricultural products, and promote our commercial fishing industry, and administer the complete program of agriculture, food and natural resource education, which includes the State FFA Association.

For more information about NJDA, please visit: [www.nj.gov/agriculture](http://www.nj.gov/agriculture)

## UPCOMING 2015 EVENTS

### Equine Pasture Walk

Wednesday, July 29, 2015

Ryders Lane BMP  
Demonstration Horse Farm  
College Farm Rd. and Ryders Lane  
New Brunswick, NJ 08901

[Kenny@aesop.rutgers.edu](mailto:Kenny@aesop.rutgers.edu)

### 2015 Hambletonian Vet Conference: Wet Labs

Wednesday, August 5, 2015

Meadowlands Racetrack  
1 Racetrack Drive  
East Rutherford, NJ 07073

[gordon@firstchoicemarketing.us](mailto:gordon@firstchoicemarketing.us)

### 2015 Hambletonian Vet Conference: Seminars

May 9 & 10, 2015

Meadowlands Racetrack  
1 Racetrack Drive  
East Rutherford, NJ 07073

[gordon@firstchoicemarketing.us](mailto:gordon@firstchoicemarketing.us)

### Open Space Pace

Saturday, September 19, 2015

Freehold Raceway  
130 Park Ave,  
Freehold, NJ 07728

[BTaft@umh.com](mailto:BTaft@umh.com)

### An Evening With Sally Ike

Tuesday, September 29, 2015

Roundhouse - Cook Farm  
Rutgers, The State  
University of New Jersey  
New Brunswick, NJ 08901

[ESC@aesop.rutgers.edu](mailto:ESC@aesop.rutgers.edu)

### Legal Issues for the Equine Industry Symposium

Monday, October 12, 2015

The Palace At Somerset Park  
333 Davidson Ave,  
Somerset, NJ 08873

[ESC@aesop.rutgers.edu](mailto:ESC@aesop.rutgers.edu)

### "The Horse: The Epic History of Our Noble Companion" Lecture and Book Signing

Tuesday, November 3, 2015

Institute of Food, Nutrition, and  
Health Building  
Dudley Road  
New Brunswick, NJ 08901

[ESC@aesop.rutgers.edu](mailto:ESC@aesop.rutgers.edu)

### Evening of Science and Celebration

Thursday, November 12, 2015

G.H. Cook Campus Center  
Rutgers, The State University of NJ  
New Brunswick, NJ

[ESC@aesop.rutgers.edu](mailto:ESC@aesop.rutgers.edu)

For more events, visit our website @ [esc.rutgers.edu](http://esc.rutgers.edu)



## Associate Director's Dedication to Equine Science Honored At National Society Meeting

**D**r. Carey Williams received the 2015 American Society of Animal Science and Equine Science Society's Equine Science Award on July 13<sup>th</sup>. She was honored at the society's annual meeting in Orlando, FL.

Williams' primary appointment is Extension/Outreach, where she provides statewide leadership in three main areas: equine nutrition, pasture management and overall horse management.

Creating programs that have focused on pasture management for horse farms and creating best management practices leading to healthier animals and a more sustainable environment, these project areas have drawn industry partners including professionals, volunteers, and youth.

"Carey has the unique gift of being able to successfully teach audiences of all ages and experience levels" said center director Karyn Malinowski. "As Associate Director for Extension at the Equine Science Center, she does a superb job of delivering science-based information about horse care & management to our constituents."

Williams was principal investigator on a successful grant titled "Sustainable Pasture Management for Horses", the first to be awarded to an equine project from the Northeast Sustainable Agriculture Research and Extension (NE-SARE) a program of USDA CSREES.

The program emphasis led to improved pasture quality and water-soil conditions on





Dr. Williams leading visitors through one of the Equine Science Center's Pasture Walk Twilight Meetings which take place throughout the year at various locations, including the Ryders Lane Best Management Practices Demonstration Horse Farm.



Dr. Williams receiving the 2015 Equine Science award, which was presented by Connie Larson from Zinpro Corporation. She was honored at the American Society of Animal Sciences' annual meeting with the award and a small reception.

horse farms meeting the mission of the SARE organization for sustainable projects.

Following the research completed for this grant, Williams became the team leader for a large multidisciplinary project titled "Creation of an Environmental Best Management Practices Showcase at the Equine Science Center".

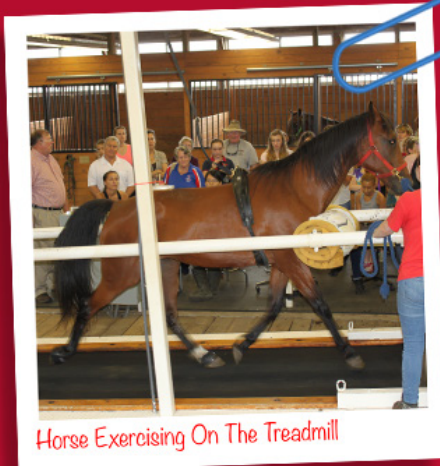
The team addressed environmental issues of importance to New Jersey's horse industry stakeholders, creating a state of the art equine Best Management Practice (BMP) showcase at the Equine Science Center's facility on the Ryders Lane Farm at Rutgers University.

Her other research focus lies in the field of equine nutrition and exercise physiology, specifically antioxidant supplementation for

equine athletes and how various products can help decrease the stress and inflammation resulting from exercise.

The results of William's antioxidant work has been recognized nationally and internationally in the nutrition and veterinary fields reflected by the number of invitations she has received to lecture on the topic.

"All of us in the Department of Animal Science congratulate Carey on the receipt of this prestigious ASAS award" said Wendie Cohick, chair of the Department of Animal Science. "We feel very lucky to have Dr. Williams as a faculty member in our department, where she contributes invaluable to undergraduate and graduate education, as well as that of horse owners around the world."



Horse Exercising On The Treadmill

Lab Notes - Malinowski

# From The Lab:



## TOP 5 TIPS FOR EXERCISING HORSES

### #1

Exercise training or conditioning is beneficial for horses over the age of 20 years.

### #2

Consider housing old horses outdoors with appropriate shelter to encourage them to move more.



# Endocrine Disruptions in Older Horses

**A**ging alters endocrine responses to exercise in horses. Stress hormones such as beta-endorphin and cortisol are typically induced during exercise and have been shown to inhibit the immune response. Previous research in our labs demonstrated that older horses exhibit signs of reduced immune function, while also producing lower levels of stress-induced hormones such as cortisol. We hypothesized that 12 weeks of exercise training would affect the responses of beta-endorphin and cortisol and that these changes would be affected by aging.

A cortisol response is important during exercise, as it activates several pathways involved in tissue repair, suppression of inflammation, and metabolic pathways that provide fuel and oxygen to the working muscles. Beta-endorphin modifies the pain receptors during exercise and may serve as a protective measure to allow horses to tolerate the greater workload to induce an adaptive response to training.

In this training study, unlike their younger counterparts, old mares did not display a rise in cortisol post-exercise. Plasma beta-endorphin rose within 5 minutes post-exercise in all mares during both pre- and post-training tests, but the young and old mares had higher levels post-exercise than middle-aged mares. Old mares had higher beta-endorphin levels after training than at the beginning of the study.

A major finding was that training appears to ameliorate the effects of aging with an improvement in endocrine function, as reflected by the increase in beta-endorphin, even though there wasn't an improvement in cortisol levels in response to acute exercise.

This training-induced enhancement of the endorphin response may have functional significance in reducing discomfort from delayed onset muscle soreness in older horses. The blunted cortisol response may explain in part why older individuals take longer to recover than younger counterparts.

**#3**

**With acute exercise be careful not to overwork older horses. Their ability to repair tissues and produce anti-inflammatory agents is reduced.**

**#4**

**Routine exercise has many benefits for older horses, including reducing body weight and fat, improving aerobic capacity, and increasing beta-endorphin concentrations after exercise.**

**#5**

**Since old horses do not thermoregulate as efficiently as younger horses so remember to NOT exercise them strenuously in hot, humid weather!**



# Fair Winds Farm:

A Harness Racer,  
Farrier, and  
Veterinarian,  
O' MY!

On Sunday June 28th Fair Winds Farm held their annual Open House. The Equine Science Center tabled at the event, giving out information about the center and talking about the programs and initiatives that we have coming up.

Dr. Malinowski was there to answer questions ranging from the recent "2014 Racing Report" to general equine related questions.

Presentations included: Dr. Patty Hogan gave tours of her equine veterinary clinic; Jacqueline Ingrassia and harness racing trotter Cool Beans, for a demonstration of his on-track prowess; farrier Tom Mulryne showed various shoeing procedures; and many other activities keeping everyone busy throughout the day.

As always, the Equine Science Center was happy to give out our new "Ask the Expert" bags, and encouraged everyone to visit the new "Ask the Expert" section on our website.

The event was truly a great way to end the "Month of the Horse" in New Jersey!



Dr. Malinowski and Kyle Hartmann were joined by Katie Kingsley, an Animal Science Major from Texas A&M University, who is volunteering with the Equine Science Center over her summer break.





## **Young Equine Scientists Visiting The Equine Science Center's "Equine Science 4 Kids" Section**

The day ended with a group of young (soon-to-be) equine scientists coming up to the table to find out what our "Equine Science 4 Kids" portal had to offer.

Showing them the "Exercising Horsepower" and "Fun on the Farm" games

gave them a great way to start their scientific endeavors.

Connecting with the younger crowd over these games, and information that the "Equine Science 4 Kids" portal has to offer, was a great way to end the day.



# The amazing life and history of Lord Nelson (Continued)



lines securely, provide officers with better lines of sight and the public a better view of officers, but horses also act as a calming presence often deescalating tension. Nelson would soon bring back some of these lessons to Rutgers, not only learning how to ride with a mounted officer but also learning how to interact with things like cars, crowds, and loud noises. Finishing the program in the fall of 1978 (he was a very quick learner), he returned to campus to start his new career.

As the first equine member of the Rutgers University Police Department, he served 10 years on the force and worked with about six different police officers. Nelson also found his way into the hearts of those around him, with his personality being one of the many things that Center director Karyn Malinowski said made him “one-of-a-kind.” She remembers one night working late in Bartlett Hall on the Cook Campus and all of a

sudden hearing a fast-paced gallop coming from the road. Upon looking out the window, she saw Lord Nelson, who remembered to “walk” on the sidewalk and not the street, going back to his stable on College Farm Road followed by a police officer, on foot, in hot pursuit. Apparently he wanted to end his shift early that night.

Eventually the police department decided to transition the horses to a student-run mounted patrol unit at Rutgers, the only such program in the U.S. As a mounted patrol horse he patrolled for over 20 years and worked with hundreds of students over his long and illustrious career.

Nelson was also the first, and only, horse to ever receive an official football penalty in a NCAA football game. In addition to his time with the student mounted patrol, Nelson also served as the horse that was ridden



by the Scarlet Knight at Rutgers football games. During a close game against Army in 1994, Nelson broke onto the field and raced all the way down the sideline to the opposite end of Giants Stadium. Receiving a yellow flag for his “un-HORSE-man like conduct,” he almost cost Rutgers the game.

Nelson retired from Rutgers in 2000, moving to Gales Way Farm to be cared for by a former Rutgers student, Wendy Gale-Hale (class of '89). “He was never one to miss his meal, even up until his passing he would eat every crumb” said Gale-Hale. “And it would always amaze me that he would eat all kinds of different foods. He ate everything but Cheetos. He would bite into them, chew once, and would spit it out. For some reason he just hated them. After spitting them out, he would give you a disgusted look, and walk away like he was mad at you.” He spent the next few years enjoying his retirement, and his very diverse meal options, and going on trail rides at the farm.

After nine years of not working for the university, the Equine Science Center thought that he might be interested in a new proposal. With the offer to bring him out of retirement to be the figurehead of Equine Science 4 Kids, Nelson would return to working for the university, and interacting with the group he loved the most...kids. Started in 2009 as a campaign to educate animal farmers in NJ about the Animal Waste Management Rule, the “Scoop on Poop” campaign worked to help farmers comply with the impending rule. As an advocate for environmental stewardship on

horse farms, Nelson was once again in the spotlight.

The Equine Science 4 Kids portal was launched in 2010 as a fun and educational space for kids to learn about horses. A companion blog was also created where

Lord Nelson would teach kids about the science of horses. In 2012 he made a surprise appearance at the Horse Park of NJ to celebrate the 50th anniversary of the State 4-H Horse Show. His duties included being an honored guest and a culinary expert for the ice cream social and bake sale. Known for his voracious appetite and love of all confectionary sweets, he fit in



Lord Nelson celebrating the holidays with friends at Gale's Way Farm.

perfectly.

In January of 2015, Nelson received the “Horse Personality of the Year Award” from the New Jersey Equine Advisory Board in recognition of all of his years of hard work. This award signifies a cornerstone in his life and a fitting way to remember an equine professor, mounted patrol horse and collegiate football legend. “I think the biggest thing that I miss about him is his routine every time that I came out to the farm” said Gale-Hale. “I would pull up, and it didn’t matter if it was raining, snowing, or sleeting, he would always come up to the gate to check on who was visiting his farm. His hearing was also amazing, so I think that he would recognize my car even before I pulled up. He would stick his head over the gate, and wait for me to come up to greet him.”

# EQUINE PASTURE WALK

*Presented by Rutgers University Cooperative Extension and  
Equine Science Center*

Join Rutgers University pasture specialists as they discuss pasture management while walking through our Best Management Practices Demo Farm. Topics to be covered include rotational vs. continuous grazing, how to evaluate your pastures, taking and reading a soil test, collecting a forage sample, along with answering all your pasture management questions.



**July 29, 2015**

5:30–8:00pm

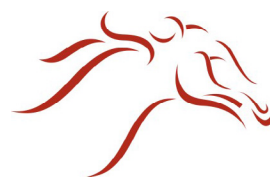
Ryders Lane BMP Demonstration Horse Farm  
College Farm Rd and Ryders Lane  
New Brunswick, NJ

Directions at <http://esc.rutgers.edu/research/ryders-lane-farm/directions/>  
Fee: \$10

Contact Laura Kenny at [Kenny@aesop.rutgers.edu](mailto:Kenny@aesop.rutgers.edu) to register.  
Light refreshments provided.

**RUTGERS**

New Jersey Agricultural  
Experiment Station



*Equine Science Center— better horse care  
through research and education*





# NELSON'S CORNER

## YOU WENT WHERE?

THE CENTER'S STAFF HAS BEEN ON THE MOVE!

The Summer is always one of my favorite times of the year. Every weekend there is a horse show or competition to go to, but more importantly, everyone seems to be going on vacations and traveling to exciting places!

Drs. Malinowski, McKeever, and Williams, along with Laura Kenny all went to the Equine Science Society's 2015 Symposium in St. Pete Beach, Florida. I think it was just an excuse to go to the beach, but they assured me that they actually did work at the conference. I'm still not so sure... they all came back with tans...

Dr. Malinowski ended up going to the University of Limerick to be an "external examiner" for their equine program... all the way in IRELAND! After I got over the excitement of her going to another country, I realized I had no idea what this meant, so I went to ask one of the other horses. I figured asking Jolee would be my best bet, considering she has a French name and France is in Europe. Well apparently an "external examiner" is not a European or Irish thing. All it is, is someone from a different university who comes to give recommendations on how to make things better.

Now that I know, I have invited horses from all of the other equine programs in the world to be "external examiners" for the Equine Science Center. One of the invites went to a school where they use aquatic therapy, which means that the horses get to exercise in pools and tubs. I hope that the horse from that school comes and makes some good recommendations, and by that I mean I hope we get a **hot tub!!!**

Finally, Dr. Williams just got back from her trip to the American Society of Animal Science's annual meeting in Orlando Florida. Before I even got to ask if she went to The Wizarding World of Harry Potter (I still want to see those horses that have wings), she told me that she won an award! She received the **2015 Equine Science Award** from the American Society of Animal Science and the Equine Science Society.

So with all of their trips and awards it got me thinking... maybe I should start going places and competing too! I'm still researching and trying to find some donut eating competitions for horses, but I haven't found any just yet. What I did find though was some great information on traveling with your horses, specifically biosecurity. So if you plan on taking any trips this summer with your horse, or competing, be sure to check out my latest **blog post**: <http://esc.rutgers.edu/farm-cooties/>

Have fun, and good luck at the competitions!

Your pal,  
Lord Nelson



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