Conserving rare breeds. All of us who raise rare breeds and work to conserve them do so because of the unique characteristics of that breed. Each has just the right adaptation, personality, performance, or appearance that makes it a breed. Conserving these characteristics means mating only within the breed; too many breeds have been lost when the purebreds used to create value in crossing weren’t maintained. The Livestock Conservancy calls this “crossbreeding out of existence.” One of the easiest ways to make sure that you and others are keeping the breed true to its own character is to use only registered, purebred breeding stock, and to keep up with registrations. Breed registries are also the Conservancy’s main source of information to prioritize breed conservation – if animals aren’t registered, then it becomes very challenging to track improvements or declines in breed conservation status.

Breed promotion. Maintaining and selecting for breed characteristics ensures that the same things that attracted one breeder will attract new breeders. This is important even to those who are raising their animals for market products. Breeders who work together through the breed association raise the level of awareness for both products and breeding stock. One needs to look no further than the highly successful marketing program for Angus beef. By registering animals, we support breed associations and their breed promotion efforts, which benefit all who raise the breed.

Raising the value of your animals. Who knows what the future will bring? Let’s look at theoretical breeder M. Suarez, who raises pigs – let’s call them the Super Heritage Breed. She is successful building a market for her animals, is able to increase the size of her herd, and naturally she keeps her best gilts for breeding. As M. Suarez learns what her customers want, she selects the gilts who can pass those characteristics to their offspring and who also developed

Why Registration Matters

By Alison Martin

A recent question from a Livestock Conservancy member raised an important point that may resonate with many of you. “The Guinea Hogs that we have are all unregistered; registration, correct me if I’m missing some important aspect, seems more important if one is wanting to sell breeding stock instead of pork products,” writes a member in North Carolina.

Some of you will empathize with him – he’s raising pigs for his own freezer, selling to family and friends, and hoping to build a side market for charcuterie, as so many are now doing with Guinea Hogs. Why pay the extra money for registered stock? After all, the folks who raised these pigs 150 years ago on homesteads across the South sure didn’t register their pigs. Such a process didn’t even exist. And another thing, some breed registries take so long to get the paperwork back, is it really worth the hassle?

Others among you will feel quite differently – you may have spent years working to conserve your own breeds and build their numbers, using breed registration and promotion as tools to encourage interest and value in the breed. Maybe you’re the breed registrar and have dedicated hours, months and years to making sure everyone gets their registration papers and helping folks use the pedigrees to make breeding decisions.

But why does registration really matter?

The Livestock Conservancy depends on breed registries as its main source of information to prioritize breed conservation. Pictured are a Red Wattle sow and piglets owned by Josh Wendland in Barnes, Kansas.
Why Registration Matters

Continued from front page

into great mothers. Not only does her herd get bigger, they get better. In fact, in five years Ms. Suarez has a reputation for having really good quality breeding stock, and other breeders approach her wanting to buy a boar. But she never anticipated selling breeding stock, so none of her pigs are registered. Wanting to make extra money by selling registered breeding stock, she asks the Super Heritage registry for the procedure, only to be told that they have a closed herdbook and that her wonderful breeding stock cannot be registered. By not planning ahead, Ms. Suarez can’t take advantage of the market for purebred breeding stock, even as a sideline to her meat business. She has also inadvertently removed her stock from the gene pool, and the improvements she has made to her stock are lost to the breed rather than providing a lasting contribution.

If your current breeding stock is registered, thank you for contributing to the future of the breed! If not, consider getting your registrations up to date or adding some registered breeding animals to your herd over time. Doing so will help ensure that your herd’s legacy will influence the breed for generations to come.

Breeders Directory Update

The next edition of the Livestock Conservancy Breeders Directory is being assembled and will be mailed out in early 2014. The distribution schedule is changing from late July to the beginning of the calendar year, taking into consideration that many people will be using the directory to buy and sell stock and products beginning in the spring. This will change the split year designation “2013–2014” to simply the “2014” directory. The directory can also be viewed online year-round at www.livestockconservancy.org.

Our Wishlist

At the Conservancy, we could use a few things under our tree this season too! Below is a list of items we can use if you are able to contribute. If you have any of these items and would like to donate them to The Livestock Conservancy, please contact us at (919) 542-5704, or email albc@albc-usa.org. All donations are greatly appreciated and a donation receipt can be provided.

Rolling suitcase in good condition (approx. 28” - 30”)
New vacuum cleaner
Gas cards
Printing and photocopying gift cards
Server < 2 years old
High-capacity external hard drive
Laptops < 1 year old
Desktop computers < 2 years old
iPads with cellular capability
19-inch+ LCD monitors
19-inch+ LCD monitors
Hanging file folders
Manila file folders
Hotel reward points
Airline miles
Car rental miles
Hotel reward points
Luggage (national chains)
Minivan
Farm truck < 50K miles
Silent auction items: restaurant gift cards, locally produced gift items, livestock or farming books, artwork, and items, etc.
In the old days, the foundation of landraces would remain intact because isolation was assured by the difficulty of bringing other animals into the area. Put another way, once folks had worked animals, the hassle of bringing in another one (even if marginally "better") simply was not worth the effort. So, before improvements in communication and transportation in the 1900s, local breeds all tended to remain isolated. After improvements in communication and transportation infrastructure, the isolation of these livestock gems became much more uncertain.

After the end of isolation (and in the current era this is true nearly everywhere), it is important to more deliberately define and conserve local landrace breeds, or we risk losing them forever. The isolation that once protected them is simply gone. For example, it may have been easy to say in 1913 that a Newfoundland Pony was any pony from Newfoundland. That is not the case in 2013 because other breeds of ponies have been introduced to the region. How a breed like the Newfoundland Pony is defined, then, becomes a critical issue, because the goal of conservation is to include every pony that meets the definition and to exclude all of those that do not.

As an aid to conserving landraces, most breeders eventually organize a registry. Registries are great, but only if they help to define and conserve the landrace. They are not so great when they impede those goals. It is important to note that for any breed, an animal is a member of the breed not because it is registered, but that it is registered because it is a member of the breed. That is, the status of an individual animal as a member of this breed is not because of its registration status, but because its ancestors had the history of foundation, isolation, and selection typical of the breed. A registry is only valid and useful if it acknowledges all such qualifying animals equally, and also if it excludes animals outside of that group. A gain using the example of Newfoundland Ponies, animals are not "more Newfoundland Pony" or "less Newfoundland Pony," they are either Newfoundland Ponies, or they are not, and the goal of the registry should be to identify and validate all of those that are.

It is common among most landraces for breeders to eventually want to close the registry after a certain number of animals have been registered. In most cases this is a mistake, because it is routine to encounter animals of the right type, foundation, and isolation for many years after the organization of breeders starts. These "found" animals are likely to be extremely important to the future genetic soundness of the breed, because usually they are not closely related to what has already been registered. For maximum benefit to the breed, these found animals need to be carefully evaluated, and then once accepted, they need to be fully accepted on equal footing with other animals in the registry.

The usual successful steps in landrace conservation include:
1. Define the foundation, isolation, and selection behind the breed.
2. Describe the overall type that resulted from step 1. This is physical, mental, and also genetic. One or the other of these might be more important, depending on the breed.
3. Identify all the animals that qualify by steps 1 and 2 and register them.
4. Develop a protocol for evaluating candidate animals that will be presented in the future but that do not have registered ancestors. This is politically tricky, but essential for the breed's genetic future.
5. Accept these qualified outside animals completely and fully into the registry. It is a common mistake to limit this to females, or to require a number of generations of mating to those lines previously registered. This completely defeats the benefit that these overlooked animals can bring to the breed.

The steps can be taken one at a time. This evaluation will use experiences with the Choctaw horse, a Colonial Spanish horse, that has had good success in conservation breeding. Possible actions with other landrace breeds will also be outlined.

**Step One: Define the foundation, isolation, and selection behind the breed.**

Knowing the exact foundation of a landrace can get difficult, but the animal history of the local area can help. In the case of the Choctaw horse, the foundation is the Colonial Spanish horses brought to the coast of Mississippi and Alabama by the Spanish in the 1600s and 1700s. The horses flourished there, and then were brought west with the Choctaw nation in 1830 along the Trail of Tears. The goal of conservation is to try to get back to that...
Conservation of Landrace Breeds

Continued from previous page

foundation as much as possible, although obviously there will be gaps in the records back to that time frame.

In the case of some landrace breeds, the original source of animals is unknown, but it is possible to say that in the case of the Choctaw horses, local horses were the usual source of equine power for centuries. Based on oral or written histories of the area and animals that were common in the region in the early period of colonization, many of the influencing founders can be inferred. The exact foundation may be tough to ferret out, but it is more possible to reflect on later additions to the scene, and to try to eliminate those influences. For example, for horses these likely include other breeds of “blooded” saddle or carriage horses that were common throughout the Americas in the late 1800s, and perhaps increasingly since then. In a sense the search for the foundation becomes “what it is not” as much as “what it is.”

Isolation

When identifying the influence of isolation on Choctaw horses, fortunately, it is helpful that the Colonial Spanish type is easily disrupted by crossbreeding to the more common North American breeds such as Morgan, Quarter Horse, Thoroughbred, or draft breeds. In other words, a trained observer can fairly accurately distinguish herds that have been influenced by crossbreeding from those that are minimally influenced. That helps to focus on more isolated herds. Between the herds, though, some have more geographic isolation than others, and also no direct indication of recent crossbreeding. Those are the herds of most interest.

The documented history of landrace breeds of conservation interest usually boils down to little or no evidence of crossbreeding to other likely candidate breeds that could have been in the area since the late 1800s. This is unlikely to be absolute. Understanding the typical appearance of the breed, as well as of the introduced breeds, can help to sort through this detail.

Selection

Selection is the final contributor to breed type. In the case of Choctaw horses, the selection history is one of free-range production, with recruitment into ranch and riding use that emphasized easy gaits, endurance, soundness, and gentle, agreeable temperament. The goal was a reliable horse that could work all day long.

While important to document, selection history is more important in influencing final type than it is in assessing the candidate animals. Nevertheless, if a candidate herd has a known history of selection that diverges strongly from the norm, that could make that herd of less interest because the final product is likely to be different.

Step Two: Describe the overall breed type.

Animals consistent with a certain combination of foundation, isolation, and selection history are going to have a consistent appearance and attitude. While there will be some variation, as is normal in all breeds, a majority type is going to emerge in the stage of defining the breed. It is animals of this type that are most useful in further defining the breed, noting that some animals vary in certain regards. This analysis is physical, mental, and also genetic. The genetic analysis must be broad enough to be inclusive, but should focus primarily on the most typical animals, unless these are all from a closely related substrain.

The overall type of the Choctaw horse is a Colonial Spanish type, which it shares with many other branches of the family tree. This type was established by traditionalists with a long history of association with the breed. The breed standard describes both the most typical and nontypical conformation and type, which allows for variation within the type. This is an essential detail if important variants are not to be lost for future generations. The horses have also been sampled widely for genetic analysis, which helps to identify typical and nontypical DNA types.

Step Three: Register the qualifying animals.

Registration of Choctaw horses has a fairly long history, especially for the branch of the breed in Oklahoma. This is through various of the multiple registries for Colonial Spanish Horse. Wherever possible, it is advantageous to bring multiple registries into congruence to see where registrations overlap, and where certain animals are excluded by one or the other, and for what reasons. If those reasons are biological (type) then they may be valid. If they are more politically motivated, then this impedes effective breed conservation. Ideally a single entity with registrations can be developed that takes the registered ponies back to their ancestors, giving them pedigrees and longer known family lines.
Step Four: Develop a protocol for accepting animals with unregistered parents.

For landraces it will nearly always be the case that ongoing searches will find animals in unusual locations and circumstances that just happen to be previously undocumented purebreds. Finding and including these is very important and has no “cut off” date.

Recently, while investigating old Spanish cattle and sheep along the Gulf Coast, a few stallions that were typically Spanish were encountered in Mississippi. This was in the region of the old original homeland of the Choctaw nation. The next step was to investigate the history, which revealed that the horses and their ancestors were bought with the large farm, and were of a stock that “had always been there.” This is the sort of history typical of a genuine and important discovery. The DNA on the stallions was evaluated, and they cluster closer to Choctaws than to anything else, and so were accepted as Choctaw horses.

For any landrace breed, it is important to realize that they might turn up in a variety of locations. The first step in evaluation is to check the type, and the breed type needs to be unmistakable on the candidate animals. That is, they should be very typical, and not out on the fringes of breed type. Then the history should always be one of isolation, and if the type is right this will likely be the case. Those with the best “eye” for type will be readily able to distinguish a specific breed. After evaluating type and history, the candidates should be evaluated by DNA analysis, if possible, and if nothing odd is flagged at this step they should be accepted.

Step Five: Accept all qualifying animals equally.

With the Mississippi Choctaw stallions as an example, the next step is to use them as full members of the breed. In this case, the breeders have discovered a strain separated from the Oklahoma horses by 200 years, so this is a distantly related strain that can bring some welcome genetic variation into the existing horses. One way to do this is to mate Oklahoma mares to a Mississippi stallion, and then to mate daughters back to the other Mississippi stallion. This would secure that line a place in the future of the breed, for the viability and long-term viability of the breed.

Something similar needs to be possible with any landrace breed for candidate “found” animals that pass all evaluations. Again, the issue is that an animal is purebred because of its foundation, isolation, and selection history, and not because of its registration status. The goal of the registration status is simply to reflect the accuracy of purebred designation. It is a mistake to doom these animals to minimal influence by insisting on multiple generations of crosses back to registered stock, for that assures that the breed cannot take advantage of the genetic breath of fresh air they offer.

Summary

These steps have proven valuable in the effective conservation of many North American landraces (Choctaw horses, Pineywoods cattle, Texas Longhorn cattle, Navajo-Churro sheep, Gulf Coast sheep, Florida Cracker sheep, Spanish goats, Myotonic goats, and many others!). When used in a clear-headed and logical way they can help to drive decisions that effectively secure these unique breed resources for a successful future.

D.P. Sponenberg, DVM, Ph.D. is a Professor of Pathology and Genetics at Virginia Tech, in Blacksburg, Virginia. He is a long-time member and serves as Technical Advisor to The Livestock Conservancy. He can be reached via email at dpsponen@vt.edu.

We’re Tweeting!

The Livestock Conservancy has recently joined Twitter and LinkedIn! With growth of our Facebook fan base by over 300% in the past year, social media has become a terrific way to reach some of our members between newsletters, connect with other organizations and find new people interested in our mission. You can find us on Twitter @LCConservancy, or through the social media links on our website.

Some interesting social media stats:
• Twitter - over 550 million users
• LinkedIn - around 259 million users
• Facebook - 1.2 billion users
• The Conservancy’s most popular Facebook post reached over 200,000 people in 24 hours
• The Conservancy’s YouTube video “Turkey Talk” has been viewed over 230,000 times to date
• Twitter’s fastest growing demographic is the 55-64 year age bracket
• YouTube reaches more 18-34 aged adults than any cable network

Next time you’re online, find us on Facebook, Twitter, LinkedIn, YouTube, Blogger, by email, and through our website. Oh, and don’t forget to #livestockconservancy!
The Livestock Conservancy’s 2013 National Conference, “Sowing the Seeds of Conservation,” took place in November in Cary, North Carolina. For this conference, experts from Seed Savers Exchange discussed heirloom plants, in addition to heritage breeds. The philosophy behind saving heirloom seeds is nearly identical to that of saving heritage livestock and poultry breeds – preserving genetic diversity in agriculture and our food systems. Attendees enjoyed over 20 workshops and clinics on topics ranging from pasture and forage management, to saving seeds, to agritourism. Next year’s conference heads to the Lone Star State for the first time and will be held in Austin, Texas, November 14-15, 2014. More details coming soon!
2013 Bixby-Sponenberg Conservation Award

This year, the Bixby-Sponenberg Conservation Award was presented at the National Conference to Jess Brown of Poplarville, Mississippi, for his years of work saving the Pineywoods cattle breed from extinction. The award is reserved for an individual or organization that has shown relentless dedication to conservation of rare breeds over many years.

Jess, a seventh-generation farmer from Mississippi, has worked tirelessly to save critical bloodlines of Pineywoods cattle, Gulf Coast sheep, and Choctaw horses. One of Jess’s most important contributions to conservation is his ability to successfully breed old cows, getting additional calves out of animals that would normally have been thought of as finished with their reproductive years. This ability to get “bonus calves” has helped secure extremely rare bloodlines and contributed to the overall strength of the Pineywoods breed. Jess also has a particular affinity for “blue” color genetics, which can be seen through the amazing variety of beautiful hues in his herd. Jess has served as an advocate and leader in the Pineywoods Cattle Registry and Breeders Association, and currently serves as its president.

A somewhat accidental contribution to conservation occurred when Jess and his family decided to keep the local “Pine Tacky” horses that had “always been there” on their land. Knowing little about the origin of the horses, the Browns decided that the horses were unique enough to possibly warrant conservation. A pleasant surprise came during a visit from Dr. Sponenberg, when he noticed that the horses very closely resembled the Choctaw Colonial Spanish horses in Oklahoma. Genetic testing was done to compare the two populations and proved that Jess’s horses in fact were the left-behind descendants of the Choctaw horses that were brought to Oklahoma on the Trail of Tears with the tribe in 1830.

According to Jeannette Beranger, The Livestock Conservancy’s Research and Technical Programs Manager, “Jess and his father always stop and take time to talk to anyone interested in their breeds. Jess is genuinely a nice person, and his sincerity has allowed him to effectively communicate with and assist many new breed stewards throughout the years.” Jess has also done an incredible amount of historical research on Pineywoods cattle and the “cattle culture” of his home county of Pearl River, Mississippi. His collection of historical photos, literature and documents is quite possibly one of the finest examples of historical breed documentation in existence today. Jess presented much of this research at the 2011 conference in Wichita, Kansas, where he took home top prize in the poster contest. The Livestock Conservancy has been thrilled to award the Bixby-Sponenberg Conservation Award to Jess, and to add him to the exceptional list of recipients of the award. Congratulations, Jess!

Jess Brown received the 2013 Bixby-Sponenberg Conservation Award. Photo by Jeannette Beranger.
Loss of an Early Leader

The Livestock Conservancy lost a beloved friend, early board member, and long-time conservationist this fall. Nils A. Berglund passed away unexpectedly Tuesday, October 22, 2013, at his home Swanton, VT. Nils was 62 years old.

Born on January 6, 1951, in Southampton, New York, he was the son of the late Leigh and Gertrude (Okerstrom) Berglund, Sr. Nils was a 1973 graduate of the University of Vermont and a 1976 graduate of the University of Connecticut, where he received a Master’s Degree in Agriculture. For many years he was an Agent for the Suffolk County Co-operative Extension Service. Nils was a poultry expert, raising and showing his own stock on a national level. He was also always there to answer a question for someone else about the raising of poultry. He loved raising chickens, ducks, geese, quail, homing pigeons, and Devon and Guernsey cattle.

Nils was former Chairman of The Livestock Conservancy (then the American Minor Breeds Conservancy), past President of the American Milking Devon Cattle Association and a former Senior Warden at St. Luke’s Episcopal Church.

Survivors include his partner of 17 years, Donald Fournier of Swanton; brother, Leigh Berglund, Jr. and his wife, Eva, of Sag Harbor, New York, his Goddaughters Erin Sepe Pirro and Martha Julian, and many special friends.

Those planning an expression of sympathy have been asked to consider donations to The Livestock Conservancy, P.O. Box 477, Pittsboro, North Carolina 27312. Private messages of condolence to the Berglund family are welcome at www.healdfuneralhome.com.
American or Import?

By Ryan Walker

At The Livestock Conservancy, we often receive questions about American vs. imported breeds being included on the Conservation Priority List (CPL). Currently, 68 of the 190 breeds on the list are unique to North America, and 122 have been imported at some point in American history. Most of the imported breeds came from Europe, brought with colonists or early explorers.

At the Conservancy, we are concerned with protecting the genetics of breeds that have a significant history of use in American agriculture, regardless of where they were developed. Because most of the original livestock in the early United States (and Colonial period) were imported, we include them, as well as the breeds that were developed later in America from these imported breeds. As of 2007, there were just over 7,600 total breeds of livestock and poultry globally, with just over 1,400 classified as endangered. 190 breeds that are rare globally and have been recently imported, but do not yet have a foundation stock are at risk geographically or politically.

The distinction of breeds unique to North America is indicated through bold listings on the CPL. The parameters for inclusion (shown for livestock breeds below) go further in depth to explain what is included on the list and what isn’t. There are breeds that were developed in America but aren’t endangered, and there are breeds that are “rare” in America, but not internationally; neither of these would be included on the CPL. Additionally, some breeds are rare globally and have been recently imported, but do not yet have a broad enough genetic base in America to allow for effective conservation.

The inclusion parameters below are for livestock. Additionally, there are similar criteria for poultry and rabbits that can be found at: www.livestockconservancy.org/index.php/heritage/internal/parameters-cpl.

Parameters of Livestock Breeds on the Conservation Priority List

Livestock breeds on the Conservation Priority List generally conform to certain genetic and numerical parameters:

1. The breed is from one of the seven traditional U.S. livestock species: asses, cattle, goats, horses, pigs, rabbits, and sheep. Rabbit parameters are defined separately.
2. The breed census satisfies numerical guidelines:
   - Critical: Fewer than 200 annual registrations in the United States and estimated global population less than 2,000.
   - Threatened: Fewer than 1,000 annual registrations in the United States and estimated global population less than 5,000.
   - Watch: Fewer than 2,500 annual registrations in the United States and estimated global population less than 10,000.
3. The breed is a true genetic breed (when mated together, it reproduces the breed type).
4. The breed has an established and continuous breeding population in the United States since 1925. Or, if imported or developed since 1925,
   - The foundation stock is no longer available.
   - Must be below global guidelines for inclusion (see #2).
   - Must have at least three breeding lines in the United States.
   - Must have at least 20 breeding females in the United States.
   - Must have at least five breeders in different locations in the United States.
   - Must have an association of breeders in the United States.
   - Must be contributing to the breed’s survival internationally. In general this means that:
     - the United States population is reciprocal to other international populations. Registry must be sanctioned by the mother organization so as not to be a dead-end for the breed, and breeding stock must be licensed according to the rules of mother organization;
     - or is an important and numerous population when compared to that in other countries;
     - or the non-United States populations of the breed are at risk geographically or politically.

Breeds not meeting all these criteria may be placed in the “Study” category and monitored.

Although conserving the breeds that have been developed in America is vital, it is important to remember that the United States itself is made up of both immigrants and native peoples. Livestock in many ways mirror the humans that have served as their stewards, in their immigration patterns, in their regional adaptations, and through their cultural identities. As we continue to work to embrace diversity in humans, the same is needed for livestock, for in the words of the late author Stephen R. Covey, “Strength lies in differences, not in similarities.”

Farmyard engraving by S. Sartain from the Conservancy’s 1868 copy of How to Make the Farm Pay by Charles W. Dickerman.
Classroom Heritage Chicken Hatching Project

By Jeannette Beranger

This past spring, The Livestock Conservancy was approached by Ginger Cunningham of our local Cooperative Extension office to help with an embryology project being conducted by a 4-H School Enrichment Program. Previously the program had acquired eggs from a local commercial hatchery, but our good friends at Extension believed that perhaps it would be more interesting for the students and teachers if they used Heritage breed eggs. That’s when Ginger came to the Conservancy.

The program was funded by the United Way of Chatham County, North Carolina, and is an annual program for Chatham County Public Schools. Chatham County 4-H furnished a 4-H embryology curriculum, materials, and incubators for each classroom. The Conservancy, through staff member Jeannette Beranger, provided eight dozen Buckeye chicken eggs for the incubators. In addition, Conservancy member Dr. Julie Gauthier of Chickcharney Farm kindly supplied over three dozen Saxony and Magpie duck eggs for classrooms focusing on ducklings.

The embryology project emphasized a “hands-on” learning experience for the cycle of life requirement in the schools’ science curriculum. The program involved incubating eggs for 21 days in a still-air incubator while learning about life cycles and proper care for animals. Students were tasked with caring for the fertilized eggs and then the chicks after they have hatched. At the conclusion of the project, all chicks were returned to their respective breeders. It was a win-win for both the schools and the farmers!

For the first time, the program classrooms were able to expand the educational message to teach the kids about various rare breeds of chickens and ducks and the necessity to work to save these creatures. Caring for and learning about rare breed birds provided an extra special experience for both the youth and the teachers and was very well received by all.

Six schools and 16 classrooms within reached out to approximately 400 children to participate in the project this year. For Julie and Jeannette it was an extremely touching experience, especially when they received hand written “thank you” cards from each and every student that included their personal thoughts on their experiences with the chicks and ducklings.

The Livestock Conservancy would like to expand and replicate this program nationally; we encourage any Conservancy members interested in developing a poultry program similar to that of the Chatham 4-H to contact us and learn how.

Jeannette Beranger can be reached at jberanger@albc-usa.org.

Hand written “thank you” cards from all the students made the hatching project even more rewarding to its leaders. Photo by Jeannette Beranger.

The embryoology program emphasized a “hands-on” learning experience for the cycle of life requirement in the schools’ science curriculum.
Unique Gait Found in Shackleford Banker Horses

By Jeannette Beranger

In continuing collaboration between The Livestock Conservancy and Mississippi State University, new findings have emerged on the gaits of the Banker horses of Shackleford Island, North Carolina. As part of MSU’s Gaited Locomotive Research Program, Dr. Molly Nicodemus has led the university’s team to study the gaits of rare breed horses found on the Conservancy’s Conservation Priority List. The initial focus has been on Colonial Spanish breeds, starting with the Marsh Tacky and the Wilbur-Cruce strains. Following these were the Banker horses of Shackleford Island. With the help of the Conservancy’s Jeannette Beranger and Alison Martin, Carolyn Mason of the Foundation for Shackleford Horses, and Sue Stuska of the National Parks Service, a series of videos were collected on the Bankers and were then sent to MSU for study. We thought it would be interesting to see if there were specific locomotive adaptations that help the horses move more efficiently for life on their sandy isle. Carolyn and Sue had always commented that the horses had a particular slower velocity and may be an example of a transitional gait walk to the trot. Nevertheless, the velocity and the limb support sequencing of this transitional gait is unique from other non-gaited horse breeds. In addition, the mechanism used for increasing velocity, limb pairing and increased stride rate instead of increased stride length, is distinctive from other horse breeds studied that exhibited a four-beat stepping intermediate gait, and thus, this gait characteristic can be applied specific to the breed."

This research can assist in preserving this and other feral horse populations unique to the United States. The uniqueness of these gaits may allow the Shackleford horses to successfully navigate through the sandy environment on their native sea island. In the big picture, selection of horses exhibiting gait characteristics specific to an environment may need to be a consideration for those managing feral horse populations.

Because of the uniqueness of the gait, Dr. Nicodemus has invited the Foundation for Shackleford Horses to give their horses’ gait a specific name as the Carolina Marsh Tacky Association did for their breed.

The Livestock Conservancy continues to collect video for future gait studies. Most recently, we have completed the collection of videos for the Choctaw horse as part of the documentation of Colonial Spanish breeds. We have also expanded the studies to include some non-Spanish horses and have recently completed video documentation of the Akhal-Teke and the Irish Draught horse.

For more information about the study, see “Temporal variables of the Shackleford Banker horse intermediate gaits” in the Journal of Equine Veterinary Science 33 (2013) 321-399.

One of Carolyn Mason’s Shackleford fillies displaying her gait for the video camera. Photo by Jeannette Beranger.

Sue Stuska with Carolyn Mason and her Shackleford filly. Photo by Jeannette Beranger.

Find us on Facebook

www.facebook.com/livestockconservancy
CRITICAL BREED Highlights

To highlight the most critically endangered breeds on the Conservancy’s Conservation Priority List, over the next year we will be featuring the breeds in the “Critical” category (currently 61 total) in this four-part series. More information can be found on our website at www.livestockconservancy.org, or by contacting each breed’s respective breed associations.

RAN DALL OR RAN DALL LI NE- BACK CA T TLE

Use: Dual Purpose
Adult Weight: 1600 - 1100 lbs
Temperament: Docile, Assertive
Experience Level: Advanced
Notes: Originally triple purpose: beef (rose veal), plowing, milk, few milk them today
Breed Association(s): Randall Cattle Registry, Inc. (www.randallcattleregistry.org); Randall Lineback Breed Association (www.randalllineback.com)

POI TOU ASSES

Use: Produce excellent mules when bred with draft horses
Adult Weight: 750 - 950 lbs
Temperament: Docile
Experience Level: Advanced
Breed Association(s): The American Donkey and Mule Society (www.lovelongears.com)

AM E RICAN CREAM H ORSES

Use: Light draft, Driving
Adult Weight: 1600 - 2000 lbs
Temperament: Docile
Experience Level: Novice - Intermediate
Notes: Calm, willing to work, unique coloring, light draft, cream colored body, amber eyes
Breed Association(s): A merican C ream Draft Horse Association (www.acdha.org)

KERRY CATTLE

Use: Dairy
Adult Weight: 800 - 1000 lbs
Temperament: Docile
Experience Level: Intermediate
Notes: Small, rugged, 5000 - 7000 lbs milk per year, active and can be nervous
Breed Association(s): A merican K erry Cattle Society (www.kerrycattlesociety.org); North American Kerry Cattle Association

RED WAT TLE HO G S

Use: Lean Meat
Adult Weight: 750 lbs (male), 550 lbs (female)
Hanging Weight: 180 lbs
Temperament: Docile
Experience Level: Novice
Breed Association(s): Red Wattle Hog Association (www.redwattlehogassociation.com)

CLE VE LAND BAY H ORSES

Use: Sport riding, Driving
Adult Weight: 1200 - 1500 lbs

Temperament: Docile
Experience Level: Novice - Intermediate
Notes: Always bay in color, intelligent, gentle, crosses make excellent sport horses
Breed Association(s): Cleveland Bay Horse Society of North America (www.clevelandbay.org)

SHIRE HORSES

Use: Draft
Adult Weight: 1900 - 2200 lbs
Temperament: Docile
Experience Level: Intermediate
Notes: Strong, gentle, great endurance, feathered legs; new-found popularity for jousting and medieval tournaments
Breed Association(s): A merican Shire Horse Association (www.shirehorse.org)
<table>
<thead>
<tr>
<th>Breed</th>
<th>Use</th>
<th>Weight Range</th>
<th>Color</th>
<th>Size</th>
<th>Characteristics</th>
<th>Temperament</th>
<th>Association(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Cruz Sheep</td>
<td>Wool</td>
<td>80 - 150 lbs</td>
<td>All wool colors</td>
<td>Medium to Large</td>
<td>Alert, Docile</td>
<td></td>
<td>Santa Cruz Island Sheep Registry (<a href="http://www.livestockconservancy.org">www.livestockconservancy.org</a>)</td>
</tr>
<tr>
<td>Campine Chickens</td>
<td>Eggs</td>
<td></td>
<td>White</td>
<td>Medium to Large</td>
<td>Very Active</td>
<td></td>
<td>American Poultry Association (<a href="http://www.amerpoultryassn.com">www.amerpoultryassn.com</a>)</td>
</tr>
<tr>
<td>Sumatra Chickens</td>
<td>Ornamental</td>
<td></td>
<td>White to Tinted</td>
<td>Large</td>
<td>Vigorous forager</td>
<td>Flightsy and jumpy</td>
<td>A merican Sumatra Association (<a href="http://sumatraassociation.org">http://sumatraassociation.org</a>); A merican Poultry Association (<a href="http://www.amerpoultryassn.com">www.amerpoultryassn.com</a>)</td>
</tr>
<tr>
<td>Holland Chickens</td>
<td>Eggs, Meat</td>
<td>5.5 - 7.5 lbs</td>
<td>White</td>
<td>Large</td>
<td>Lustrous plumage</td>
<td>Docile</td>
<td>American Poultry Association (<a href="http://www.amerpoultryassn.com">www.amerpoultryassn.com</a>)</td>
</tr>
<tr>
<td>Saxony Ducks</td>
<td>Meat, Eggs</td>
<td>6 - 8 lbs</td>
<td>White, Blue-green</td>
<td>Extra Large</td>
<td>Good forager, winter hardy, likes to range</td>
<td></td>
<td>A merican Poultry Association (<a href="http://www.amerpoultryassn.com">www.amerpoultryassn.com</a>)</td>
</tr>
<tr>
<td>Cotton Patch Geese</td>
<td>Meat, Weeding</td>
<td>9 - 12 lbs</td>
<td>White</td>
<td>Large</td>
<td>Vigorous forager</td>
<td></td>
<td>American Poultry Association (<a href="http://www.amerpoultryassn.com">www.amerpoultryassn.com</a>)</td>
</tr>
<tr>
<td>Shetland Geese</td>
<td>Meat, Weeding</td>
<td>10 - 12 lbs</td>
<td>White</td>
<td>Large</td>
<td>Calm</td>
<td></td>
<td>American Poultry Association (<a href="http://www.amerpoultryassn.com">www.amerpoultryassn.com</a>)</td>
</tr>
</tbody>
</table>
CLASSIFIEDS

AD RATES: WORD ADS: 25 cents/word. CAMERA-READY DISPLAY ADS: (Dimensions width x height) ¼ page (3½” x 4¾”), $96/issue. Business-card size (3¼” x 2”), $32. Maximum ad size: ¼ page. Additional charges for typesetting and photos. 10% discount for full-year insertion (4x) of display ads. To place an ad or for more information, email rwalker@albc-usa.org.

Be Part of the American Story

American Karakul Sheep Registry
11500 Highway 5, Boonville, MO 65233
Telephone: 660-838-6340

Breed of the American Rabbit N.S.C
http://www.americanrabbits.org/
AmericanRabbits@yahoo.com

Stock available nation-wide

DARE to be Different!

Bouncy, natural black medium wool for outerwear.
Desirable small cuts of close-grained, flavorful, tender lamb & mutton!

AMERICAN BLACK WELSH MOUNTAIN SHEEP ASSN.
Promoting a heritage breed of dual-purpose sheep, their fiber and meat

Please visit the website: www.blackwelsh.org for more information.
P. O. Box 534, Paonia, CO 81428-0534
info@blackwelsh.org

Breed Associations

26th Annual National Sale

Sat Jan 25, 2014 • 10 AM MST
National Western Stock Show – Denver, CO

GENES THAT FIT HIGHLAND BLOWOUT!

Live broadcast with internet bidding at LiveAuctions.tv
Absentee & phone bids Sheridan Auction Co. 517.749.7976
For sale catalog or to arrange trucking:
AMERICAN HIGHLAND CATTLE ASSOCIATION
303.659.2399 • info@highlandcattleusa.org • www.highlandcattleusa.org

American Milking Shorthorn Society

800 Pleasant Street, Beloit, WI 53511-5456 • Tel: (608) 365-3332 - Fax: (608) 365-6644

Native Milking Shorthorns - perfect for milk or meat!

COMMERCIAL viability
Meat and milk in one package! Use a Native Milking Shorthorn to add milk to your cow herd.

OLDEST CATTLE HERDBOOK
Milking Shorthorns were recorded in the first Coates herdbook in 1822.

DISEASE RESISTANT
Native Milking Shorthorns are relatively trouble-free, leaving you more time to manage your paddocks.

STELLAR CHARACTERISTICS
Noted for maternal instinct, gentle disposition, calving ease, good udders, milking ability, and high weaning weights.

www.milkingshorthorn.com
BREEDING STOCK FOR SALE? Advertise in The Livestock Conservancy News. Deadline is January 30 for the next issue. Email rwalker@albc-usa.org or call 919-542-5704.

Spanish Goat Association

No Fees
No Politics
Just Breeders

www.spanishgoats.org
540–687–8871

Barbados Blackbelly Sheep Association International

www.blackbellysheep.org
info01@blackbellysheep.org
(417) 398-2875
Breeder’s Directory available for Barbados Blackbelly and American Blackbelly

Also available—The Lamb Lover’s Cookbook—over 100 new ways to eat lamb!

NDGA
8370 W. Abbey Ln.
Wilhoit, AZ 86332
http://www.ndga.org
(928) 445-3423 registrar@ndga.org

NDGA
8370 W. Abbey Ln.
Wilhoit, AZ 86332
http://www.ndga.org
(928) 445-3423 registrar@ndga.org

American Kerry
Cattle Society

www.kerrycattlesociety.org
7392 E 109th St, Overbrook, KS 66524 785.836.3065

PINEYWOODS
Cattle Registry & Breeders Association
www.PCRBA.org 601-795-4672

Red  *  White  *  Blue
Product of the USA

Shetland Sheep

Not just another pretty face!

A primitive,”unimproved” breed, Shetlands maintain a natural thriftyness, hardiness, easy lambing, adaptability and longevity.

Learn more at shetland-sheep.org
North American Shetland Sheep Association

The Livestock Conservancy News, Autumn, 2013 Page 15
Check out The Livestock Conservancy website for more news, updates, and information. www.livestockconservancy.org

Standard Bred Poultry
Hatching eggs, young and adult birds for sale. Inquire for availability and prices.
For more info visit www.heritagepoultry.org or call Suzanne Selby at 501.868.9339

Heritage Poultry
CONSERVANCY

The Cleveland Bay Horse: critically endangered

American Dairy Goat Association
Serving the Dairy Goat Industry since 1904
- Performance Reports
- Sanctioned Show
- Production Testing
- Linear Appraisal
- Annual Convention
- Spotlight Sale
- Youth Programs
- National Show
- Quarterly Newsletter
- Membership Directory

P.O. Box 865 • Spindale, NC 28160 • Phone 828-286-3801
Fax 828-287-0476 • www.ADGA.org

The Livestock Conservancy runs this advertising section as a service to its members, and accepts the ads in good faith and trusts that buyers and sellers will exercise their own good judgment in completing any transactions.

ACDHA
AMERICAN CREAM DRAFT HORSE ASSOCIATION
Nancy H. Lively, Secretary
193 Crossover Road • Bennington, VT 05201
802-447-7612 • lively123@comcast.net

The “Cream” of Drafts
America’s Only Native Draft Horse
Visit us at www.acdha.org

Spanish Barb Horse Association
www.spanishbarb.com
Dedicated to the preservation, perpetuation and promotion of the Spanish Barb Horse
Discover the Horse that Discovered America
Contact us today to join and help preserve the Spanish Barb
info@SpanishBarb.com 520-797-1882

American Guinea Hog Association
The perfect homestead hog
Easy to raise and handle
Disease & parasite resistant
Tender, flavorful meat

American Guinea Hog Association
PO Box 93 • Cross Plains, WI 53528
www.guineahogs.org
SVF Foundation is collaborating with Tufts Cummings School of Veterinary Medicine to preserve rare and endangered breeds of livestock through the cryopreservation of embryos and semen.

If you are interested in providing livestock to SVF or acquiring animals for your own farm please call (401) 848-7229. Thank you for supporting this important program.

A Bridge to the Future for Heritage Breeds
www.svffoundation.org

NEWPORT, RHODE ISLAND

The English Shepherd Club
Learn more about the original all-purpose American farm dog, the English Shepherd.
For an informational brochure and breeder directory, send US$8.00 to:
The English Shepherd Club, Inc.
2146 380th St.
Grafton, IA 50440

The English Shepherd Club, Inc. is a 501(c)(3) nonprofit educational organization whose mission is to preserve, support, and promote the English shepherd breed. For more information visit www.englishshepherd.org

Cotswold Breeder’s Association
An organization formed to preserve and promote the breed, provide registration for all purebred Cotswold Sheep, both white and natural colored, and provide information and support for the mutual benefit of all members and breeders.

P. O. Box 441, Manchester, MD 21102
www.cotswoldbreedersassociation.org
cbaregistrar@gmail.com

GLOUCESTERSHIRE OLD SPOTS

From the Outer Banks to the AIHR/HOA National Show...

Horse of the Americas Registry
Promotes EVERY ALBC approved strain of America’s First Horse.

Positive promotion, not politics.
2295 E. 230 N., Attica, ID 47918

The Livestock Conservancy News, Autumn, 2013  Page 17

Advertise in The Livestock Conservancy News. For more info, call (919) 542-5704 or email rwalker@albc-usa.org.
Shepherds are needed to preserve this historic & genetically significant breed.

**THE LAVENDER FLEECE**

3826 N. EASTMAN RD., MIDLAND, MI 48642
989.832.4908 • WWW.LAVENDERFLEECE.COM

**American Soay sheep.** Healthy, low maintenance, miniature, excellent grazers. Soay sheep are an ancient breed who shed their wool. Available are 1 ram, 4 ewes and 1 wether. All are from the Johnson line. Beau Chemin Preservation Farm. www.beaucheminpreservationfarm.com (207) 691-8164.

**Southern Oregon Soay Farms**

**BRITISH SOAY SHEEP**

541-955-8171

Original US Importer - AI genetics

Lambs and Fleece

P.O. Box 1382, Merlin, OR 97532

www.soayfarms.com

kathiem@soayfarms.com

**Jacob Sheep**

• Registered Breeding Stock
• Fleece, Roving, Pelts

**Bear Creek Farm**

Bend, Oregon • BearCreekFarm.org

**Leicester Longwool**

The Foundation Breed that George Washington raved about!

**The Lavender Fleece**

3826 N. EASTMAN RD., MIDLAND, MI 48642
989.832.4908 • WWW.LAVENDERFLEECE.COM

**Metzer Farms**

Gonzales, California
800-424-7755

Extensive website:
www.metzerfarms.com

Nationwide Shipping

We specialize in waterfowl with over 30 breeds of ducks & geese - heritage, meat, eggs, beauty, pest and weed control.

**SANTA CRUZ HORSES**

10931 Singer Ave
Los Molinos, CA 96055
www.sunshinesanctuary.org
sunshinesanctuary@yahoo.com
Ph. 530-529-0183
cell 530-566-2159

**Colonial Spanish**

Status: Critical
Graze
Your best source of information on grazing and northern pasture management.

For a free sample:
608-455-3311
graze@ticon.net
PO Box 48
Belleville, WI 53508

Desert Weyr
Black Welsh Mountain Sheep
Ken & Oogie McGuire
16870 Garvin Mesa Road
Paonia, CO 81428
(970) 527-3573
www.desertweyr.com
sales@desertweyr.com

Miscellaneous
Poultry and livestock books and pamphlets, old and modern; also collectibles, medals, stamps, etc. Free price list. Lee Poleske, PO Box 871, Seward, AK 99664.

Small Farmer’s Journal
For twenty-five years this large, handsome publication has told the story of modern animal-powered agriculture while offering an astonishing variety of other articles of interest to the small family farm. Including a wealth of information on rare livestock breeds from Dutch Belted Cattle to Boer Goats to Cheval de Merens Horses to Navajo-Churro Sheep to Randall Lineback Cattle and dozens more. Guaranteed to change your life or your money back, period.

Quarterly, $37 U.S.
Canada/Foreign add $20/yr postage.
Small Farmer’s Journal
featuring Practical Horsefarming
Dept D086, PO Box 1627
Sisters, Oregon 97759
541-549-2064 or 800-876-2893
www.smallfarmersjournal.com

Farming Magazine
People, Land and Community
“A magazine that offers a hopeful vision for the future of farming on a small-ecological scale.”
-Quarterly publication
-Articles from real farmers
-Beef Keeping section
-Farm & Home section
-Hints for farm & home
-Farm Almanac
-Recipes
-Gardening articles

1 year (4 issues) US $18.00
Canada $24.00
2 years (8 issues) US $32.00
Canada $45.00
You can also subscribe through our web site.
www.farmingmagazine.net

Rural Heritage
“Borrowing from yesterday to do the work of today.”
More than a magazine...
It’s a way of life.
One year (six issues) $29.00
PO Box 2067, Cedar Rapids IA 52406
(319) 362-3027 • www.ruralheritage.com
CALENDAR

++++ denotes Livestock Conservancy event
++ denotes Conservancy participation
See the Conservancy website for a more extensive list of events. The Livestock Conservancy encourages event organizations to submit events related to conservation, farming, sustainability, rare breeds, and more to the Conservancy’s Calendar. Send your submission to rwalker@albc-usa.org or mail to PO Box 477, Pittsboro, NC 27312.

January, 2014

January 10-11 – The Minnesota Organic Conference will be held in St. Cloud, MN. Includes dozens of practical workshops, a large trade show, organic meals, and networking opportunities. For more information, call (651) 201-6012, email jessica.miles@state.mn.us or visit www.mda.state.mn.us/organic.

++ January 15-18 – The Practical Tools and Solutions for Sustaining Family Farms Conference will be held in Mobile, A.L. Features pre-conference courses and field trips, eight tracks of practical conference sessions, networking, trade show, Taste of Alabama dinner and more. Schedule available at www.ssawg.org, or email media@ssawg.org to request a brochure.

January 17-February 8 – The 118th Annual Southwestern Exposition and Livestock Show will be held in Fort Worth, TX. The event features world-class livestock shows, kid-friendly exhibits, carnival/midway fun, live music, and nightly rodeos. Over 1 million visitors and 22,000 head of livestock participate each year. Visit www.fwwsr.com for more information.

January 21-25 – American Highland Cattle Association 26th Annual National Show & Sale will be held at the historic National Western Stock Show in Denver, C.O. Absentee/phone bids are encouraged; contact Sheridan Auctions (517) 676-9800. Online bidding is available at LiveAuctions.tv. For trucking options contact AHCA prior to the week of the sale. For a sale catalog or more information, (303) 659-2399, info@highlandcattleusa.org or visit www.highlandcattleusa.org.

January 23-25 – The Northern Plains Sustainable Agriculture Winter Conference “Honoring our Roots – Celebrating 35 Years” will be held in Aberdeen, SD. Visit www.npsas.org or call (701) 883-4304 for more information.

February

February 5-8 – The Pennsylvania Association for Sustainable Agriculture (PA SA) Annual Conference, Farming for the Future, will be held in State College, PA. For more information, call 814-349-8956 or visit www.pasaframing.org.

February 7-9 – Horse Expo Pomona will take place at the Fairplex in Pomona, CA. Come for demonstrations, shopping, lectures, competitions, breeds, saddles, horse sale, trailers, and trucks. For more information, visit www.horseexpoevents.com.

February 7-8 – The 31st Annual New Hampshire Farm & Forest Expo will be held in Manchester, N.H. Events include an industry trade show, educational workshops, demonstrations, food, and contests. Visit www.nhfarmandforestexpo.org for more information.

February 15-16 – The Ohio Ecological Food and Farm Association’s annual conference, Affirming our Roots, Breaking New Ground, will take place in Granville, OH. The event is Ohio’s largest annual gathering of farmers, consumers, researchers, gardeners, and businesses committed to organic and sustainable agriculture. Visit www.oeffa.org or call (614) 421-2022 for more information.

Feb 27-March 1 – The Midwest Organic and Sustainable Education Service (M OSES) Organic Farming Conference will be held in La Crosse, WI. The largest organic and sustainable farming conference in the U.S. will be held at the historic National Western Stock Show in Denver, C.O. Absentee/phone bids are encouraged; contact Sheridan Auctions (517) 676-9800. Online bidding is available at LiveAuctions.tv. For trucking options contact AHCA prior to the week of the sale. For a sale catalog or more information, (303) 659-2399, info@highlandcattleusa.org or visit www.highlandcattleusa.org.

March

March 7-8 – The New England Meat Conference will be held in Concord, NH. The conference goal is to enhance the production, processing, and marketing of sustainable, nutritious, humanely-raised, and delicious meat from New England farms by providing educational and networking opportunities for meat producers, processors and consumers. Visit www.newenglandmeatconference.org for more information.

March 9-11 – The California Small Farm Conference will be held at the Doubletree Hotel in Rohnert Park, CA. The conference includes day-long short courses and farm tours, focused workshops, speakers, and networking opportunities. For more information call (916) 231-2141 or visit www.californiasmallfarmconference.com.

March 18-20 – The Midwest Poultry Federation Convention will be held at the Saint Paul RiverCentre in Saint Paul, M N, with the largest regional poultry show, exhibits, and networking opportunities. Visit www.midwestpoultry.com, call (763) 682-2171, or email info@midwestpoultry.com for more information.