

AIMA Newsletter N°12 Summer 2018



Fruit and vegetables, Wikipedia Commons
Peggy Greb, U.S. Department of Agriculture

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- ❖ Be sure to visit the **AIMA website** at <http://agriculturalmuseums.org/> for more information and frequent updates on subjects concerning museums of agriculture.
- ❖ ... and send this **Newsletter** on to your friends to encourage them to join us in the AIMA, in its networks of practice, for advice and exchange.

Thanks to all the contributors who help us make the Newsletter



Highlights

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Animals in Museums and Beyond

- ❖ The Livestock Conservancy: International Heritage Breeds Week 20-26 May 2018
- ❖ Fête de la Vache Nantaise, local cattle breed festival, France, 7-9 September 2018
- ❖ JPPM Of Animals and Men, French special heritage events day
- ❖ Commented illustrations of harness, polling, handling by Bob Powell, Barbara Corson and Ed Schultz
- ❖ Genesee Country Village horse Thomas and his home-made hames by Matt Schofield
- ❖ An upside-down horse collar for an ox! a conversation with Gene Staples, Ed Schultz, Emmanuel De Meulenaer, Rolf Minhorst
- ❖ Cattle footcare: claw-trimming film in three languages from Zurich University



Resources

- ❖ Gourmand Award-winning “French Regional Breads” by Mouette Barboff
- ❖ Archaeo Cutting Tools website (sickles and scythes galore) by André Marbach
- ❖ Classics
 - ❖ Tomatoes & Co: The Fascinating World of the Nightshades by Charles Heiser
 - ❖ Ox-chanting in France and beyond (in French)
 - ❖ History of fallowing practices (in French) by Pierre Morlon and François Sigaut



Join the AIMA via PayPal

AIMA 2018 Executive Committee Meeting in Delhi, India

Hosts: Centre for Community Knowledge and Indian National Trust for Art and Cultural Heritage



Centre for Community Knowledge (CCK) at Ambedkar University Delhi

The Centre for Community Knowledge (CCK) is a premier institutional platform in India in interdisciplinary areas of Social Sciences, to link academic research and teaching with dispersed work on Community Knowledge. The CCK aims to document, study and disseminate the praxis of community knowledge, so as to improve our understandings of our living heritage, and integrate community-based knowledge in the available alternatives. In this way, it is trying to bring oral and community knowledge into the academic knowledge mainstream, as well as empowering marginal communities, adapting to environmental impacts and changes in public policy. It has initiated programmes, both urban and rural, that develop people-centered narratives of knowledge, history and cultural transformations.

The CCK is also an Archiving Centre and is engaged in creating digital archives of community knowledge, obtained both from ethnological and anthropological researchers, community organisations and self-initiated resources.

We work with cultural and scientific research institutions like the Anthropological Survey of India, Indian Museum, National Museum, Indian National Science Academy and others. By bringing together community knowledge holders with scholars and cultural administrators, the Centre is working towards developing an interdisciplinary reassessment of our cultural pasts, through the reexamination of museum holdings that expand the sources of knowledge by bringing community knowledge into the mainstream.

Much of this effort concerns traditional agricultural practices, which have been driven away from the centre-stage in a fast globalising country, with agriculture representing only 14% in the national economy in 2012, although the 2011 census showed that about 70% of the population remains rural. As elsewhere, farmers are often forced to lease or sell their land to big landowners or commercial agricultural interests, even though their rich traditions can still be a source of knowledge to resolve the challenges of the present. One of the CCK's methods to provoke people of all origins into more awareness of this vanishing wealth of knowledge is by using innovative forms of artistic events that focus on old knowledge as something more than nostalgia or eulogising of tradition.

Just to provide one example of the value of documenting traditional farming narratives, in the dryland farming region of hilly central India, researchers found farmers using a variety of paddy (rice) – Number 16 – as the seed of choice to maintain food security in the face of highly variable rainfall patterns. As the name suggests, the seed is not traditional or local, and

in 2012, a science reporter mentioned having helped plant this paddy seed at an experimental farm. The continuing fertility of the variety over at least fifty years ruled out a lab-bred hybrid origin, marking it as a pre-green revolution (mid 1960s) variety. No longer distributed officially from the late 1960s, seed 'Number 16' was first distributed in the mid-1920s, at a time when the most successful seeds in an agro-climatic zone were distributed throughout the zone. This example drew attention to such 'under-the-radar' community-used adaptations to ensure food security, and highlights the need to integrate traditional, community-based knowledge in the policymaking process.



The CCK will be partnering with INTACH, the Indian National Trust for Art and Cultural Heritage, to host the AIMA Executive Committee annual meeting in November of 2018. The INTACH ambit is both broad and deep, running from architectural heritage through many aspects of material culture, heritage education and heritage tourism, and on to intangible cultural heritage. Established as a Registered Society in 1984, with UNESCO Special Consultative Status, INTACH is especially proud of its Knowledge Centre with its unique and mainly unpublished resources, making it quite distinct from other institutions' libraries and resource centres. Among its many fields of interest, traditional agriculture and its adaptation to our transformative times is one of the principal concerns of INTACH. For a lively introduction to the broader heritage movement typified by INTACH, please see our Featured Video on the homepage at <http://www.intach.org/>.

The Executive Committee meeting official working sessions will be enriched by companion events in Delhi and visits to agricultural museums with varying origins and administrative structures. More information will soon be available to any interested participants and we cordially invite you to join us in Delhi this November.

For further information, on the CCK at AUD, see <http://www.aud.ac.in/academic/centres/cck>





Vice-President's Message: Debra Reid

Food, Agriculture and Public History

Local Food Systems: A Place to Start

It's an exciting time for public historians interested in putting the farm-to-fork movement into historic context. Both agricultural history and food history factor into the equation. Recent books about *Interpreting Agriculture at Museums and Historic Sites* (2017), *Interpreting Food at Museums and Historic Sites* (2015), and *Public History and the Food Movement: Adding the Missing Ingredient* (2018) provide plenty of things to think about.

<https://rowman.com/ISBN/9781442230101/Interpreting-Agriculture-at-Museums-and-Historic-Sites>

<https://rowman.com/ISBN/9781442257207/Interpreting-Food-at-Museums-and-Historic-Sites>

<https://www.routledge.com/Public-History-and-the-Food-Movement-Adding-the-Missing-Ingredient/Moon-Stanton/p/book/9781629581156>

Interpreting agriculture serves a public good if it fosters public discourse. This is a tall order given the general lack of understanding about agricultural practices and associated policy, economics, and social and cultural systems, historically and today.

Agricultural History Society

Secondary resources exist to document agricultural history. The second oldest professional history organization in the United States, the Agricultural History Society (AHS), began in 1919. The AHS attracted an interdisciplinary group of historians, some in academia but others in civil service positions. The history that they studied, be it agricultural production, marketing, land policy, and technology, had direct application to their work. It informed public policy as well as museum curation of collections at the Smithsonian Institution, the International Harvester collection, and the Museum of Science and Industry in Chicago, to name a few. <http://www.aghistorysociety.org/>

Agricultural history helps us understand changes in agricultural policy and technology that culminated in the nadir of local food systems during the 1980s. AHS Fellow and past president, Deborah Fitzgerald, explained the complicated scenario that veritably eliminated farm-fresh foods in Iowa in "Eating and Remembering," *Agricultural History* 79, no. 4 (Autumn 2005), 393-408.

Association for Living History, Farm and Agricultural Museums (ALHFAM)

Support systems exist for those interested in putting farm-to-fork and slow-food initiatives into historic context. The Association for Living History, Farm and Agricultural Museums (ALHFAM <http://www.alhfam.org/>) began in 1970. ALHFAM provides resources to interpret agriculture, facilitates the exchange of information via professional interest groups, and offers regional and international conferences and skills workshops

(<http://www.alhfam.org/InterpAg>). Members can access ALHFAM's Skills and Knowledge Base (<http://www.alhfam.org/ASK/>), featuring nearly 25,000 items (nearly 50 years' worth)

of ALHFAM publications about the theory and practice of agricultural interpretation and living history programming.

Living history farms, open air museums, and historic sites help connect children of all ages with landscapes and livestock, and plows and plants that historically supported local food systems (as well as global commodity chains). Farmhouses, barns, sheds, and outbuildings provide a setting for multidisciplinary programming that often features kinesthetic activities essential to the production of food on farmsteads (including feeding and milking the family cow, separating cream from milk, and churning the cream into butter).

Agriculture and Public History NCPH Working Group

A working group eager to explore “Agriculture and Public History” convened at the annual meeting of the National Council on Public History (NCPH) April 18-21, 2018

(<http://ncph.org/phc/agriculture-and-public-history-2018-working-group/>)

The working group attracted participants eager to pursue the following goals:

- Devise strategies that can make historic sites and public history projects a “go-to” source to increase agricultural literacy (delivering content about local food systems as well as global commodity chains of food, fuel, and fiber)
- Adopt a humanist perspective and develop humanities-based strategies to engage the public in agriculture and agricultural history. Note that humanities disciplines (history, art, theater, philosophy, literature) and social sciences disciplines (politics, culture, economics, cultural geography) can inform public interpretation of agriculture (a theme naturally related to STEM disciplines)
- Devise and test approaches to document agriculture and the environment in specific places/regions, within crop and livestock cultures; show how place/environment affected crop and stock management and human relationships over time. Note that this local research will document changes in local food systems over time, will document production and processing of feed for humans, feed for animals, and feed for both, and will indicate relationships between local food systems and global commodity chains.
- Develop a framework for museums, historical societies, and historic sites (including living history farms) to use in collection and interpretive plan development.
- Ensure that gender, race, ethnicity, power, and authority inform all projects.
- Ensure that historic connections rather than rural-urban dichotomies and myths inform all projects.

Museum collections and mission rarely include evidence critical to understanding the disappearance of local agricultural production, marketing, and distribution systems for food (or for fiber and fuel). Most document historic agriculture and local food systems remained relevant through the 1930s. Fewer document the agricultural system that developed after World War II, one that depended on fossil fuels, synthetic chemicals, and genetically modified organisms.

Public history can draw attention to the sustainable models that existed historically and that remain worthy of preserving, interpreting, and perpetuating. This requires analysis of site-specific evidence that documents local food, fuel, and fiber production and marketing systems that co-existed with global commodity chains at least until the 1970s. Now local food systems are experiencing a rebirth, and that is reason enough to draw more attention to the issues via public history. Lessons learned from this experience can sustain exploration of the other two critical agricultural production systems (fuel and fiber).

Framework for Adding Agriculture to Public History: Getting Started

To get started, the Agriculture and Public History working group has a sequence of questions that facilitate a review of existing resources (including local history), and exploration of relevant topics to consider before engaging with the public.

- What do you do (or want to do) to make “agriculture” and “farming” something that the public wants to learn more about?
- What unique attribute(s) does your site or public history / research project have that become assets about agriculture (or farming) and public history?
- What aspirational goal(s) do you or your site have that can further public engagement with agriculture (or farming)?
- What challenges exist?
- What persistent questions arise around items such as funding resources, community outreach, locations, to name a few?
- How do humanities approaches inform your work? Provide a specific example.
- How do social science approaches inform your work? Provide a specific example.
- How do STEM subjects inform your work on agriculture? Provide a specific example.
- What have you learned by researching agriculture and/or farming in one place and time that has direct connections to local food systems, global commodity chains, and other modern issues about health, the environment, sustainability, or other subjects?
- How do you address gender, race, ethnicity, and power in your studies of agriculture and/or farming?
- How does the city and the country factor into your local history of agriculture and/or farming (and the food, fuel, and fiber produced)?

Conclusion

Agriculture, an essential human activity, has gained a reputation as a destroyer of ecosystems and of genetic diversity. Alternative agriculture serves as agriculture’s alter ego – the approach associated with organic producers or farmers committed to using oxen or horses rather than fossil fuels. Agriculture is more complicated than this duality conveys. Today, both alternative and industrial farm families, and consumers, function between these two extremes. Increasing public engagement with agriculture can sustain engagement with a subject essential for human survival.

Debra A. Reid, Curator of Agriculture and the Environment, The Henry Ford, Dearborn, Michigan. Reid is author of *Interpreting Agriculture at Museums and Historic Sites* (2017). You can reach Reid at debrar@thehenryford.org



Special Guest

Museums Australia: The Invisible Farmer

Women play a vital role in feeding the world. But they are significantly absent from our histories, museums, rural narratives, board rooms, and official documentation such as the census. A quick search for ‘farmer’ on Google Images is a powerful illustration of the ongoing invisibility of women involved in land management and food and fibre production.

The stories of rural Australia have focused primarily on the legends and achievements of men. When I first took on the curatorial responsibility for the agricultural collections at Museums Victoria, I found tractors, ploughs, instruction booklets, thousands of photographs, a massive collection of barbed wire, patent models of windmills and other agricultural equipment. But where were the farming families, where were the women?

Museums Victoria holds one of the largest and most significant agricultural collections in Australia – but only half the story was being told.

The Invisible Farmer project began in 2017. It is the largest ever study of Australian women on the land. Initiated by Museums Victoria this three year project is funded by the Australian Research Council and involves a nation-wide partnership between rural communities, academics, government and cultural organisations. The project aims to reveal the untold stories of women on the land, to rewrite Australian histories, to redefine 'farmer', and to celebrate and understand the vital role of women in agriculture.

Museums Victoria is using a number of strategies to engage communities in this project.

First, personal stories are at the heart of this project. We are collecting stories of the past and the present, from the diversity of agricultural sectors across Australia. In addition to the stories the Museum is collecting, we are actively inviting the community to share their own stories – all of these are being profiled via our website blog (www.invisiblefarmer.net.au/blog) and through social media via Facebook, Twitter and Instagram, as well as being featured in exhibitions and public programs.

A pilot education program ‘Untold’ was conducted in Victoria last year. This real-life learning program involves inter-generational conversations between children and farmers. The stories collected are then shared back into their communities through digital platforms, exhibitions, artworks, etc. This has been a powerful tool in building and connecting community through understanding and celebrating agriculture, place and people. Dylan (Grade 4) commented: ‘I used to think farmers were men. I liked Invisible Farmer – it was the best of everything we did this year. We learned lots of things we

wouldn't have just at school.’ We are currently seeking additional funding for the ‘Untold’ education program to be available online.



Students from Peranbin Primary School with the artwork created from the ‘Untold’ Pilot Education Program, 2017. Museums Victoria

Second, we are particularly interested in addressing the absence and invisibility of farm women in our museums. This involves reviewing the language and metadata we use in our catalogues, redefining ‘farming’ to include the unpaid work of women, and inviting museums to ask new questions and use new methods to document women and their place in the history

of agriculture. We are working closely with Museums Australia (Victoria) to promote these strategies to community museums involved in the Victorian Collections program, which is an online resource that showcases Victoria’s community museum collections. See <https://victoriancollections.net.au/stories/stories-of-women-on-the-land>

The third strategy involves an active social media campaign to help facilitate conversations about farming and why gender equality is important to its future. This is also a great way to build national and international support for the project, to profile museum collections, and showcase the particular and important role of museums in contemporary society.



Lisa Shannon’s story sparked an amazing response within the first days of publication on Facebook. Telling her story was transformative for Lisa and inspirational to many readers. Museums Victoria Invisible Farmer has sparked a great community response, and was listed in the

top ten achievements in Australian agriculture for 2017. The social media attracts 80-100,000 interactions per month, with active engagement from farmers, general public, and national and international partners, academics, government and NGOs. Some individual posts have had over 50,000 interactions. The project has been heavily profiled in TV and radio news, magazines, and industry journals. The six-week pop-up exhibition ‘Women of the Land’ at Melbourne Museum received considerable community and media attention.

The impact and success of the Invisible Farmer project is closely aligned with our active community engagement methodology and the project’s contemporary relevance. As a result, many of our interviewees have become important advocates for the project. Sallie Jones, a Victorian dairy farmer, has helped link us with other farmers, promoted the project through her extensive social media and industry networks, is involved in our public programs and actively encourages other women to participate in Invisible Farmer by sharing their stories. Sallie even featured the project on her milk bottle!



Sallie Jones was one of the first farmers to be interviewed for Invisible Farmer. She is a co-owner of Gippsland Jersey, which she established in honour of her father. Gippsland Jersey is now one of only two farm-owned milk brands in the region. Museums Victoria

Thinking about her own journey as a female farmer, Sally reflected that: ‘Growing up on the farm, men’s voices were always the loudest, even though my Nana and Mum had the most impact behind the scenes. I’ve had to push that boundary for myself to say “it’s okay for me to have a voice.”’ And, following her involvement in Invisible Farmer, Sallie said "I hadn’t known what to expect when I was interviewed by the Invisible Farmer Project, but the power of sharing stories can have so many unexpected outcomes, and can forge connections that you wouldn’t dream possible."

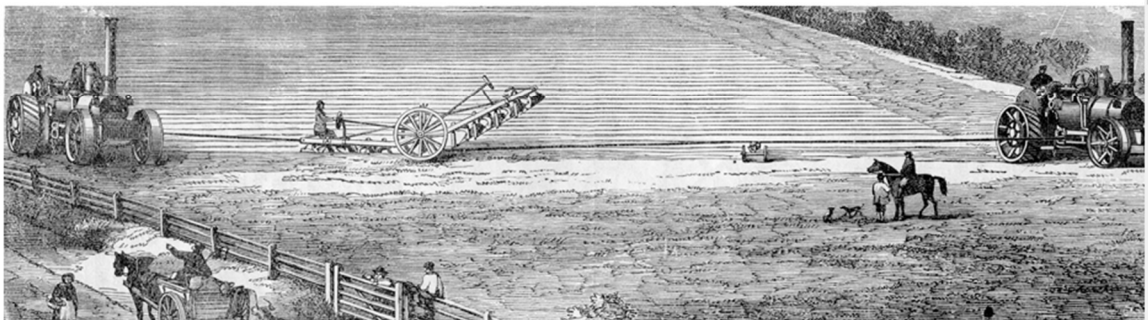
Find out more about Invisible Farmer at our website <https://invisiblefarmer.net.au/> and join the conversation with @invisfarmer on social media. Liza Dale-Hallett, Senior Curator, Sustainable Futures, Museums Victoria, ldale@museum.vic.gov.au



Conferences Exhibits Projects Festivals News from Friends



8th International Conservation Conference 10-12 October 2018 National Museum of Agriculture and Food Industry, Szreniawa, Poland



The National Museum of Agriculture and Food Industry in Szreniawa invites you to the **8th International Conservation Conference** to be held October 10-12, 2018. The conference is organized as part of the cycle entitled “Problems of Maintenance and Conservation of Museum Collections” with the support of the National Institute for Museums and Public Collections. We would like to devote this event to the protection of cultural goods, grouped in four thematic modules:

- I. Organization and management of conservation in museums
- II. Conservation issues related to objects made of organic material
- III. Conservation issues of objects exhibited in the open air
- IV. Differences between the static and dynamic display of objects of technical heritage



We will begin discussion of the above issues on the basis of presentations on the potential for improving efficiency of conservation by creating appropriate conditions in terms of organization and management, specialized training and exchange of experience. Next, we will discuss the subject of conservation of objects made of organic materials. This involves issues such as: the destructive influence of time, the impact of the technical condition of rooms and climatic conditions on historical objects, or preventive conservation. We will emphasize problems related to the maintenance and conservation of collections in Skansen-type museums, resulting from the display of these objects outside. The conference will end with talks discussing the differences between the static and dynamic display of objects of technical heritage. The topics will include the significant issue of "living museums" and compliance with conservation rules in the context of preparing objects of technical heritage for operation.



The second day of the Conference, October 11th, will involve a study trip to the Wolsztyn Steam Engine Room and to the Club of the Lovers of Old Tractors and Agricultural Machinery in Lipno. Discussions on the maintenance of objects of technical heritage are planned in both locations.

The organizers plan to publish the papers and presentations submitted, as well as presentations concerning conservation means / materials / methods. The conference fee of PLN 500 includes accommodation, meals and a conference package (including the conference program and summaries of speeches). In the case of conference participation without accommodation, the fee is PLN 300. The speakers will receive two copies of the complete conference proceedings.

We hope that the planned event, as its previous editions, will contribute to the integration of activities for the protection of our shared cultural heritage. Hanna Ignatowicz h.ignatowicz@muzeum-szreniawa.pl



Making, Using and Enjoying: The Museum of the Intangible



MAKING, USING AND ENJOYING

The MERL project **Making, Using and Enjoying: The Museum of the Intangible** is funded by Arts Council England and explores the potential of intangible cultural heritage (ICH) and creative and digital practice to improve research and understanding of our collections and to extend engagement. As part of the project we are developing a ‘toolkit’ to help

museums and heritage organisations use the combination of intangible cultural heritage ideas and visual arts and other creative practices to engage and enrich the lives of new audiences. Please visit the project website at <https://merl.reading.ac.uk/merl-collections/research-projects/making-using-enjoying/>

There are many ways of understanding and interpreting the term ‘intangible cultural heritage’. UNESCO defines ICH as ‘the practices, representations, expressions, knowledge and skills – including the instruments, objects, artefacts and cultural spaces associated with them – that communities, groups and individuals recognise as part of their cultural heritage.’ UNESCO typically divides ICH into five ‘domains’: oral traditions; performing arts; social practices, rituals and festive events; knowledge and practices concerning nature and the universe; and traditional craftsmanship. Others define ICH more broadly as ‘lived experience’ or ‘ways of living’. For more information, please contact: Greta Bertram gretabertram@gmail.com



EXARC.net

EXARC Journal 2018 Digest



EXARC's Journal is a combination of peer-reviewed articles that are highlighted with a use mix – called “Mixed Matters” – of useful information, much of which is of interest to agricultural and rural life museums, as well. For example, among the peer-reviewed, specialist articles,

“Vacation in the Past: Effective Heritage Interpretation through Education” will strike a chord, as will the interpretation article on participant observation in “A Perspective from Medieval Food”. Other articles on reconstruction of a late Mesolithic child’s rattle made of animal teeth will speak to all those concerned with children’s toys and accessories, and many museums that have their own metal-working or blacksmithing activities may be interested in the article on metal recycling and alloy analysis. The “Mixed Matters” include announcement and reviews of archaeology-pertinent conferences and the book reviews often propose items that fit perfectly into AIMA members’ concerns about study of the past and all aspects of “Time Travel”.

See the journal offerings online at <https://exarc.net/journal>. Remember, AIMA members and friends might well wish to propose publishing an article with EXARC!



The first “Day of Experimental Archaeology” at the Open-air Lab Lauresham, Lorsch Abbey, Kloster Lorsch, Germany / 29 April 2018



On the first "Day of Experimental Archeology", visitors to the Lauresham

Open-Air Laboratory and Visitor Information Center took part in a varied and colorful program from the temporary exhibition about Archaeology in South Hessen, entitled "Looking over the Shoulder of Researchers and Learning New Research on the Early Middle Ages". There will also be lectures, exciting films and project screenings to hands-on archaeology for the whole family.

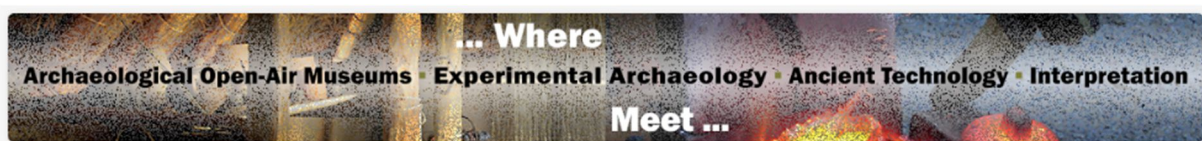
Open-air laboratory – research under the open sky

As an ideal-typical reconstruction of a Carolingian manor, Lauresham is an open-air laboratory for living experimental archeological research. It stands on a 4-acre site with over 20 different early medieval house models, a variety of livestock as well as arable land and gardens. With experiments and long-term studies on the topics of indoor climate, home and agriculture, the researchers, working in close cooperation with universities and other research institutions, gain deeper insights into the life and everyday world of people around 800 AD.

Highlights with Special Guests

The first Lauresham lecture for Experimental Archaeology with Prof. Dr. Aidan O’Sullivan (UCD Dublin) on the topic of “Early Middle Ages and Experimental Archaeology in Ireland” and

Dr. Roeland Paardekooper (Director EXARC) on “The Role of Experimental Archaeology in Europe”. Do check out the website at Lorsch Abbey: <http://www.kloster-lorsch.de/en/>



Announcing the new EXARC website

EXARC launched its new website - a three-year project that has 2,500+ pages and about 100,000 visitors annually. Visit EXARC at <https://exarc.net/> where you can check out, for example, the locations of over 500 archaeological open-air museums world-wide, as well as universities and higher education institutions teaching experimental archaeology, living history and ancient technologies. Each of these institutions has a brief presentation, their exact address and a link to their official website for the latest information.



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An Organization of People Who Bring History to Life

Report on the 2018 Conference in Oklahoma coming soon

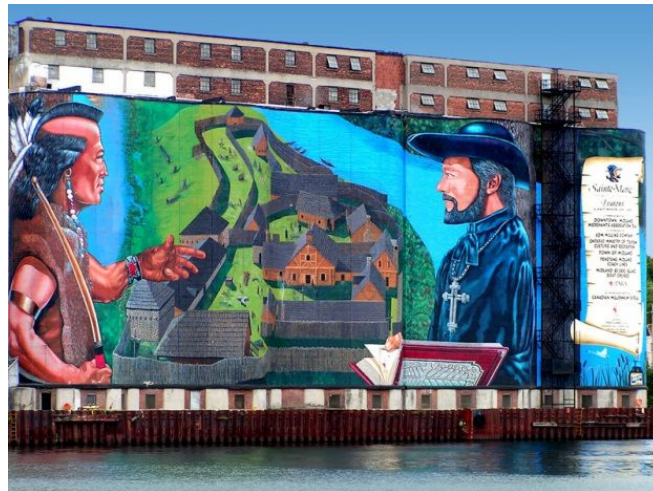


June 1-5, 2018

Oklahoma Historical Society and Cherokee Nation
Tahlequah, Oklahoma

2019 ALHFAM Annual Conference 8-12 June 2019 Sainte-Marie-among-the-Hurons, Ontario, Canada

Ever think of sleeping in a Huron/Wendat longhouse? How about inside a seventeenth-century French building? Here is your chance! In 2019, at the Annual Meeting at Sainte Marie among the Hurons in Ontario, Canada, we are offering ALHFAM conference attendees the opportunity to spend a rustic evening/overnight with us on our historical site. If you can bring a sleeping bag, please do. If not, we have plenty of bedding to choose from. We have a store of woolen blankets to make you feel perfectly at home in the seventeenth century. Prices will be available soon, so contact conference chair Del Taylor at del.taylor@ontario.ca for more information or to express general interest. The 2019 Annual Conference is scheduled for June 8-12, 2019. Be sure that you have an up-to-date passport!



Mural in the harbor, history of Sainte-Marie-among-the-Hurons,
Wikipedia Commons, GNU Free Documentation License.



folk life

The Society for Folk Life Studies (SFLS) Annual Conference in Cardiff, Wales / 13-16 September 2018 "Culture and National Identity"

The Society's annual conference for 2018 will be held in Cardiff, Wales, and is hosted by Amgueddfa Cymru-National Museum Wales. This year coincides with the 70th anniversary of the opening of what was originally called the Welsh Folk Museum at St Fagans, just outside the city. This was the **first open air museum in the British Isles** and over the last few years it has undergone a major **redevelopment** to create a dynamic National Museum of History and Archaeology that will be completed in October.



The theme of the conference is 'Culture and National Identity' and it will be based in three locations – National Museum of History and Archaeology at St Fagans, the National Museum, Cardiff, and the Cardiff Story museum in the centre of the city. We will also explore the regenerated docklands of Cardiff Bay. The conference accommodation will be at the Premier Inn in the centre of the city, a short walk from the railway station.



As is always the case with the SFLS annual meetings, the Cardiff conference is very place-based, with several talks devoted to the Cardiff area and its inhabitants, including famous football players, as well as the influence of sport on integration into the very special identity of Wales, where part of the population speaks a language far different from English. Cardiff is

also the seat of the Welsh Parliament, a building designed by the architect Richard Rogers, and the meeting will include a visit to that, as well as to the town and harbour. As announced, other speakers will delve into various questions of Welsh identity, past and present. However, the place of honour is reserved to the National Museum of History and Archaeology itself, with its long history of composing with a national identity set in the United Kingdom and the multiplicity of its cosmopolitan city, as well as the uniqueness of its collections involving inquiries in both languages. The Museum is a very hands-on place with its Skansen-like reconstruction of both rural and urban buildings, domestic and public, and the wealth of skills and experience in architectural reconstruction that continues to go into its development.

For any further information, please contact the Conference Secretary, Steph Mastoris Steph.Mastoris@museumwales.ac.uk and see the NMHA website (and click on “Cymraeg” for a look at the Welsh language) at <https://museum.wales/stfagans/new-welcome/>



ICOM 6-8 June 2018 AIMA-EXARC Joint Report

The ICOM yearly gathering in Paris in June offers an opportunity to network with museum colleagues from around the world, often with the special attraction of the unexpected – a chance meeting with a new Korean friend who can help the AIMA with contacts in Southeast Asia, delightful exchanges with a highly professional ICOM mentor, a chance to listen to the vastly different preoccupations of museum staff in Egypt and Norway.

AIMA Past President Merli Sild and former Secretary Cozette Griffin-Kremer attended the 2018 ICOM meeting with Roeland Paardekooper, Director of EXARC (see above), who wrote up a highly informative report in which he covers many of the pertinent figures, from the ICOM's 41,000 members worldwide to the challenges raised by the ICOM's new €126,000 website and members database. Roeland's emphasis is on the meeting of the international committees, most particularly because EXARC, like an international committee, handles a theme rather than a country or region, and he details discussion of the ICs' activities, aspirations for more efficacy and obstacles encountered along the way. IC meetings are in larger groups, a contrast to the workshop on capacity building, smaller, less formal and evidently more fruitful for networking. European groups focused on privileging visitor engagement, especially knowledge transmission from one generation to the next, a stimulating contrast to the main concern of the Asian group with collection management or the Southern Hemisphere groups hoping to bypass elitist/European models in search of museums as role models in society. Many ICOM member initiatives could be taken up by AIMA, for example, the Dutch “ICOM Family” site that enables museum professionals to contact colleagues anywhere in the world, see <http://www.icomfamily.nl/> For details of Roeland's report, check out <https://exarc.net/issue-2018-03/mm/mission-icom-paris-icom-june-meetings-2018>.



The contrast between North and South was highlighted by a major event in the choice of the 2022 triennial ICOM General Conference venue, because the meeting will center on the Bibliotheca Alexandrina in Alexandria. In spite of considerable development and material issues that were wisely pointed out by the ICOM examining committee, Egypt won the three-way race hands down, to obvious jubilation from the general membership, as it represents a first for any country in Africa, with the conference theme “The Discovery of Identity”. Only full country members vote in these elections, but affiliate members such as AIMA can observe the process. Of course, there were programme updates from the 2019 ICOM host, Kyoto, where the theme will be “Museums as Cultural Hubs: The Future of Tradition”, for some 3,000 participants, 1-7 September 2019. The Kyoto meeting will focus on global issues and museums, local communities and museums, and museum definition and systems. While the Alexandria venue also takes up the challenge of rediscovering the diversity of communities through museums, it concentrates on national identity, the special tasks of fashion, food and traditional craft museums, museums’ role in consolidating identities, and digital techniques role in building national identity in museums.



All members including affiliates can attend the general meetings, where much of the discussion is anticipated by the Annual Report, and there is *much discussion*, each time, concerning network development and strategic plan, the social role of museums and contribution to professionalism. These everyday museum concerns stand in stark contrast to the ICOM’s ongoing mission to protect museum holdings through the database “Red List of Cultural Objects at Risk”. More mundanely, but equally interesting for professionals is the publications series, including the twice-yearly peer-reviewed journal *MUSEUM International*.



The ICOM Annual Meeting is a cultural event set within the context of the UNESCO campus and the organization’s heritage promotion activities. In June, this included a handsome poster exhibit on “Intangible Heritage in Poland” and a rich exhibit with a lecture and demonstration programme on Indonesian batik textiles.



The meeting offers many opportunities for networking, seeking partners and mentors, often among professionals entirely outside the agriculture and food sectors, who are willing channels of communication to colleagues closer to AIMA’s definition and objectives. It is also advisable to keep close watch over the ICOM statutes, which change. For example, it is no longer necessary to have 50% of an association’s members affiliated with ICOM in order to become a member and the ICOM encourages present affiliates to join international committees. Various internal group meetings are highly interesting for many museums, such as the ETHCOM Ethics Committee, especially concerned with the independence of museums from too overt political influence and with sustainable environmental/architectural practices. AIMA member museums and researchers can also find contacts outside the classic agricultural sector and it was a pleasure to see old friends in the association of glass museums (appropriately entitled GLASS), the CAM (the Commonwealth Association of Museums) or ICMEMO (Memorial Museums), the latter especially confronted with the challenges of “hard history”, an engagement much encouraged by the ICOM in any museum field.





Call for Panels: Rural History 2019, 10-13 September, Paris

It is with great pleasure that we announce the holding of **Rural History 2019**, the fourth biennial conference of the European Rural History Organisation (EURHO), in Paris from Tuesday 10 to Friday 13 September 2019. This meeting will be organised by the École des Hautes Etudes en Sciences Sociales (EHESS), through the Centre de Recherches Historiques (CRH), in collaboration with the CNRS (Centre National de la Recherche Scientifique), the FMSH (Fondation Maison des Sciences de l'Homme) and the EPHE (Ecole Pratique des Hautes Etudes). The EURHO Conferences aim to promote a dialogue between rural history researchers that transcends national frontiers, crosses chronological barriers and breaks down disciplinary boundaries.

The Paris Conference will be open to all proposals employing new methods, introducing new approaches, exploring new concepts or yielding new results across a wide range of themes, time periods and spatial boundaries. We encourage all scholars and researchers to bring their knowledge and experience to this event. We particularly welcome panels and papers dealing with the economic, social, political or cultural history of the countryside (agricultural or artisanal production, social reproduction, consumption, material culture, power relations, gender, well-being, village life, political relations, technological and scientific improvements, tourism etc.) and featuring links to environmental, political, anthropological and cultural history — and, beyond these, an interest in the preoccupations of geography, sociology, economy, archeology, agronomy, biology and zoology.

All researchers working on the history of the countryside are invited to submit **panel proposals**. A panel should focus on a specific topic and include participants from at least two countries. Panel proposals will be assessed by the Academic Research Committee (*comité scientifique*) which will accept or refuse them, or suggest modifications. Organisers will be advised of other paper proposals that may relate to their panels. Double sessions on a particular topic are possible, but triple sessions are not.

Each session will last two hours and include four papers. Sessions will be led by a chair and a discussant. The presentation of new research and of work in progress is particularly relevant. Participants may not propose more than two papers.

A session proposal should include a title, the full name and affiliation of the organiser or co-organiser, and a short abstract (up to 500 words) introducing the topic, its scope, themes and approach, and the names and affiliations of at least two of the proposed panel contributors; a draft call for papers may also be included.

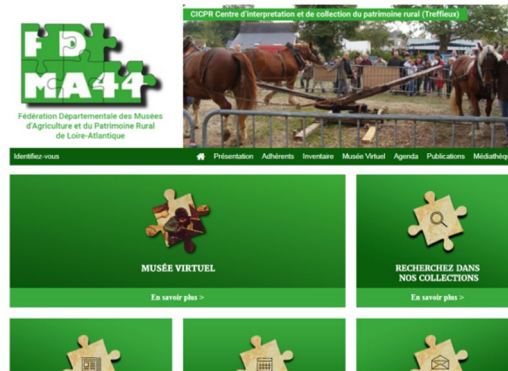
The deadline for panel proposals is 15 October 2018

Only online submissions via this link: <https://eurhoparis2019.sciencesconf.org/user/submit> (which can also be found at the conference website), will be received by the Academic Research Committee. For any questions, please contact Federico Zemborain: federico.zemborain@ehess.fr More information about the conference at our website: <http://www.ruralhistory.eu/conferences/rural-history-2019> Conference website: <http://ruralhistory2019.ehess.fr>



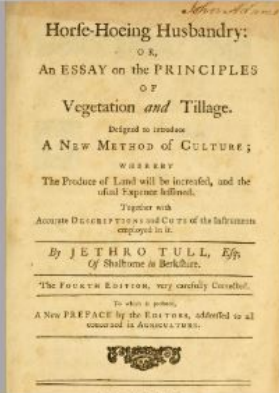
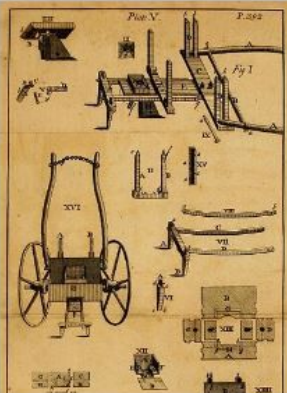
The FDMA 44 Virtual Collection

The FDMA44 (Fédération Départementale des Musées d'Agriculture Loire-Atlantique), an association that started modestly in a local movement, propelled by a prestigious 2006 colloquium on tillage techniques, has persevered in its commitment to acquiring the skills in handling collections and communications that would enable some of its members, like the Ecomusée rural du Pays Nantais, to be accepted into the ranks of the FEMS (Fédération des Ecomusées et Musées de Société), a true label of quality. The FDMA44, works on the scale of a *département*, of which there are 96 in metropolitan France.



The FDMA44 brings together a highly varied membership, from local rural life or trade museums, to viticulture and agriculture museums, engaging equally with museum professionals, researchers and smaller associations to communicate on events and professional training. The two-pronged mission of the FDMA44 is unique for a group of its size in France: making a high-quality inventory of their collections and constructing a virtual museum to guarantee all the items will be shared free-of-charge with any interested visitor. Just to cite one example, see exemplary documentation on the horse-hoe, as historical implement and a tool for tomorrow at <https://www.patrimoinerural44.fr/discover/focus/3#/home>.

Horse-Hoeing Husbandry or An Essay on the Principles of Vegetation and Tillage

 <p style="text-align: center;">Couverture ouvrage Jethro Tull</p>	<p>Jethro Tull a inventé le semoir mécanique en 1701 pour semer les céréales en ligne afin de pouvoir les biner.</p> <p>Il inventa donc aussi l'instrument permettant des binages rapides en utilisant la traction animale : la houe à cheval.</p> <p>Il présente ses théories et ses nouveaux instruments dans son ouvrage <i>Horse Hoeing Husbandry</i>, dont la première édition est parue en 1731.</p>	 <p style="text-align: center;">Planche ouvrage Jethro Tull</p>
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Even if you do not read a word of French, leafing through this will be an exceptional experience in agricultural history and future, with a thorough explanation of how a horse-hoe was worked, its structure and the delightful technical touches added by ingenious local implement-makers to respond to specific local needs, a typology of the horse-hoe, an

introduction to its makers and manufacturers, a glimpse of its internationalization, and present-day horse-drawn versions... some forty webpages of information!

For more information, contact contact.fdma44@gmail.com or Stéphanie Thélie stephaniethelie@yahoo.fr and visit the homepage at <https://www.patrimoinerural44.fr/>



Special Section: Food News



A Taste of Food History and Archaeology

Close on the Bladdernut's Heels (a work-in-Progress) by Andreas Heiss

The bladdernut (*Staphylea pinnata* L.) is an amazingly underestimated shrub when it comes to ethnographic, historical, and archaeological research. Although edible and rather tasty, even most modern authors prefer to copy medieval author Johannes de Cuba's (unfounded) warnings against its toxicity.



Left Fig. 1. Renaissance depiction of the bladdernut in Basilius Besler's *Hortus Eystettensis*;
Right Fig. 2. Bladdernut seeds showing their (cut) noses © Andreas G. Heiss.

The first monographic approach trying to compile “everything” available on its uses throughout history was published in the journal *Folk Life** in 2016, uncovering the various colourful aspects of its use – as medicine, lucky charm, ornament, and food. Given its natural distribution with a strong south-eastern European focus, it may seem surprising to find it even in Roman graves in Denmark. The symbolic value for those people taking bracelets with *Staphylea* beads with them so far to the north is unknown.



Left Fig. 3. Modern bladdernut rosary from Auvergne © Anne Stampfler; Right Fig. 4. Bladdernut rosary beads from a 19th- century grave at Matzleinsdorfer Platz, Vienna © Christine Ranseder.

Later periods at least seem to give us hints: beginning with the Renaissance, we find lots of mentions of their use in rosaries. They served as beads bearing the *memento mori* due to their resemblance to tiny skulls, or heads with their noses cut off. In spite of frequent mentions of this use in the literature, and ongoing production of such items (as documented for France, the Vatican, and southern Poland), archaeological finds of the actual rosaries are rare. Up to now, only Kortrijk, Belgium, and Vienna, Austria, have sites from which bladdernut rosaries were recovered.

The author will keep on looking for archaeological evidence wherever it turns up – any hints are welcome! And if there’s a bladdernut in your vicinity, think of giving it a chance as an eerie raw or roasted snack, although cracking those little skulls may turn out to be a bit tough...

Dr. Andreas G. Heiss, Austrian Academy for Sciences, Vienna

References:

- Cooremans, B., 2010, Enkele opmerkelijke archeobotanische vondsten uit Vlaanderen: zaden van de pimpernoot, ook bekend als paternosterbollekesboom (*Staphylea pinnata* L.), in *Van Planten en Slakken/Of Plants and Snails: A collection of papers presented to Wim Kuijper in gratitude for forty years of teaching and identifying*, 51–56, C. C. Bakels, K. Fennema, W. A. Out, and C. Vermeeren, eds., Sidestone Press, Leiden.
- * Heiss, A. G., D. Filipović, A. Nedelcheva, G. Ruß-Popa, K. Wanninger, G. Schramayr, R. Perego, and S. Jacomet, 2014, A Fistful of Bladdernuts: The Shifting Uses of *Staphylea pinnata* L. as Documented by Archaeology, History, and Ethnology, *Folk Life: Journal of Ethnological Studies*, **52**(2), 95–136.
- Heiss, A. G., 2016, „... ende van de notkens worden Paternosters ghemaect“ — Ein neuzeitlicher Rosenkranz aus Pimpernusskernen (*Staphylea pinnata* L.) vom ehemaligen Matzleinsdorfer Friedhof in Wien, *Fundort Wien. Berichte zur Archäologie*, **19**, 102–109.



Bridging AIMA, ALHFAM, TIMS, Heritage Milling in the Netherlands and the quest for older cereal grain seeds by Alisa Crawford



Alisa has sent us an introduction chock full of weblinks for all those interested in milling and bread-making. She trained in the Netherlands and is the only overseas member in the professional and traditional grain millers' guild of the Netherlands. She was also the first woman to be admitted and knows how important it is to share with internationally and support one another's work. "Sometimes we are just separated by an ocean and a language, but if we can find a way to bridge that, we become united and are stronger as a result." She is also a member of TIMS, which is The International Molinological Society. TIMS studies mills worldwide, animal-, wind-, or water-powered, and has a symposium every four years. The most recent was in Romania in 2015 at the Open Air Museum in Astra because they have a collection of 80 mills there. TIMS will go to Berlin in 2019, see the website at <http://www.molinology.org/> Alisa is also a member of the American Mills Society, SPOOM, the Society for the Preservation of Old Mills, please visit <http://www.spoom.org/> and, as the English-speaking member of the Dutch Guild, keeps in regular touch with the Traditional Corn Millers Guild in the UK, see <https://tcmg.org.uk/mill-news-2/> The professional traditional millers in England are pushing forward with improving the quality of bread in their country. There is a good initiative in the UK called the Real Bread Campaign. Here is the link: <https://www.sustainweb.org/realbread/> Here is the link to the guild in the Netherlands, as they are very concerned about the quality of flour and good bread. (NB the website is in Dutch): <http://www.molenaarsgilde.nl/>



An additional exciting achievement that has occurred in the Dutch world of milling is that the craft of milling was added to the UNESCO World Heritage List of Intangible Heritage. It is the first item of intangible heritage that the Dutch chose to nominate and is a true recognition of the role of millers. The day after the announcement, they held a party in Amsterdam and showed a video of millers from all over the country with their mills. Look for Alisa at the close of the video, waving greetings from Holland, Michigan, USA. They also requested that

millers put their mills in the joy position* for three days following the announcement, see this on the video at <https://www.youtube.com/watch?v=WXv5hby9GuM>

Two very fine open air museums Alisa enjoys in the Netherlands are in Arnhem (the National Open Air Museum) and in Enkhuizen (the Zuider Zee Museum). The one in Arnhem tells more about agricultural history, while in Enkhuizen it is more on seaside and fishing life. In Arnhem there is a nice earthen and brick bake oven which inspired her to build one on her own site, Windmill Island. This authentic Dutch windmill was brought from the Netherlands in 1964. Alisa grinds whole wheat (whole grain) flour from wheat grown in the region, as well as heritage corn (organic and non-GMO) grown by a local farmer within 10 miles of the windmill to make into corn meal and polenta. Milling highlights the joy of helping visitors make the connection from field to fork, of shortening the food chain and helping strengthen our local and regional food system, and it is all done with an old Dutch windmill and sustainable power = using the past to improve the present.



Alisa's commitment to preserving heritage and ancient grains has led her to search and network with others to get seeds, then work with local farmers to grow them. This helps save landrace and heritage grains and increases biodiversity. One of the seeds she is working on growing out is an almost extinct ancient form of barley, now only grown in the northernmost region of Scotland. She is also interested in ancient forms of wheat that date back to the oldest known and is in contact with an organization involved in saving heritage and ancient grains, see <http://www.growseed.org/>

* The joy position in windmills: It was quite easy to read the 'code' of the sails, even at a great distance, because ... a windmill is always on high ground, so the position of the sails speaks its own language... Looking at the upper sail, you will always see it move from right to left. Millers express 'joy' by making this sail stop just before it reaches the highest (vertical) position, then fixing the sail in the so-called 'coming' position. The upward movement which the sail can then still make is associated with joy, to announce celebrations in the mill, on account of the birth of a son or daughter, a marriage, birthdays, or something of the kind. (Excerpted from <http://www.let.rug.nl/polders/boekje/tradition.htm>) Contact Alisa at A.Crawford@cityofholland.com



Stone Age bread predates farming



Creative Commons Attribution-Share Alike 3.0 unported, Home baked unleavened flour and water flatbread on a red tablecloth, 11 April 2009, Author Jonathunder

Ancient bread loaves dating to 3500 years ago have been found in Egyptian tombs, and domed ovens possibly used for baking date back to 9000 bp in an early farming settlement in Turkey. Now, archaeologists working in northeastern Jordan at the Natufian Shubayqa 1 site have dated crumbs found near fireplaces to 14,400 years ago, four millennia before farming took off in the area. These charred remains contain wild barley, einkorn wheat and oats, as well as tubers, and appear to be from flatbread, possibly baked on hot stones. For the detailed study, including the *chaîne opératoire*, see the full article in the *Proceedings of the National Academy of Sciences* online (PNAS).

“Stone Age bread predates farming” by Colin Barras, *New Scientist*, 21 July 2018, 6, and PNAS <http://www.pnas.org/content/early/2018/07/10/1801071115> for “Archaeobotanical evidence reveals the origins of bread 14,400 years ago in northeastern Jordan” by Amaia Arranz-Otaegui *et al.*



Thinking outside the lunch box: Canada Agriculture and Food Museum hosts lecture on cricket farming



Two brown crickets (*Gryllus assimilis*) in captivity feeding on a piece of carrot, Wikipedia Creative Commons, Sean Wallace, 2012

Would you like crickets with that? As part of their ongoing ‘[Food For Thought](#)’ lecture series, the Canada Agriculture and Food Museum hosted Darrin Goldin from [Entomo Farms](#) on Thursday, February 15th for a lecture all about crickets as a

sustainable source of protein. Darrin and his brothers operate a commercial cricket farm in Norwood, Ontario, supplying food-grade crickets to restaurants, food



Deep-fried house crickets (*Acheta domesticus*) at a market in Thailand, Wikipedia Creative Commons, by Takeaway, 2013

Darrin's fascinating presentation examined the process of farming crickets, their vast nutritional benefits, the growth of the

manufacturers, and grocery stores across North America, including Loblaws, one of the largest retail grocery chains in Canada.

industry, and partnerships his company is working on with farmers in developing countries, like Madagascar. His presentation was followed by a lively Q & A, with questions ranging from the difference in cricket breeds, to the noise of housing tens of millions of crickets in one facility. Participants could also sample roasted crickets from Darrin's farm, and some protein cookies made with cricket powder. All in all, it was a very informative evening that generated a lot of 'buzz' about insects as a sustainable source of protein.



The explosive growth of cities is changing agriculture in poor countries – examples from Bangladesh and Nigeria

Their landscape used to gleam with the sunlight on bright green rice fields, but most of the land is now covered with water to produce carp, pangasius, catfish and tilapia. In 2016, Bangladeshi farmers produced 2.2m tonnes of fish, more than fishermen caught in the wild and more than fish farmers in any other country, with the exception of China, India, Indonesia and Vietnam, thus doubling Bangladeshi production since 2008 and multiplying by 19 the 1984 production figures. Aquaculture research and investment, as well as infrastructure, especially road-building, have contributed to this increase, but the main driving force is the development of cities, which are transforming farming worldwide.



Left: Bangladesh, 2006, Fishing, 05-05-2006, ARD, Michael Foley, World Bank, Wikipedia Creative Commons
Right: A commercial broiler (meat) chicken operation, USDA, Joe Valbuena, undated, Wikipedia Creative Commons

Still, 94% of Bangladesh's farmed fish is consumed inside the country. No wonder, with the population of Dhaka now standing at around twenty million and probably growing by half a million a year. This development has not been driven by government or foreign aid, but by ordinary farmers transforming their landscapes, since aquaculture requires about twice as

much labour per acre as rice farming and demand is year-round. Seasonal hunger, once a constant in rice-farming regions, is rare now in the water-world districts and people are eating more protein. Having reduced the cost of food in their cities, Bangladeshis working there can now send more money back to their families in villages.

However, this success has its costs. Lowering of prices squeezes the producers and regular flooding has driven up the cost of rice. The largest impact comes from oversupply, a problem not specific either to aquaculture or to Bangladesh.

A parallel development has taken place to supply the 12 to 15 million residents* of Lagos in Nigeria who consume some 70% of the white meat produced – broiler chickens and, for the Christmas market, turkeys and cockerels. There are around 1,000 medium and large poultry farms in Nigeria, up from some 400 in the 1990s and 2000s. They now require 1.8m tonnes of maize, compared to some 300,000 in the 1990s and yet, the average Nigerian still eats only two chickens a year.

There is a contrast between the two food production booms: Asian fish farmers are often former rice producers, while the African poultry producers are more likely to be well-connected urbanites, with investment underwritten by multinational agribusiness. On the other hand, both industries are being professionalized and face international competition, for example, from illegally imported poultry, in the case of Nigeria. Unreliable statistics make planning more difficult and lack of quality certification of farmed fish bars exports to richer countries demanding clear standards, pending the spread of improvements already underway in both areas. However, as the farmers observe, twenty-five years ago, people often starved for want of both maize and rice. “Now we feed it to animals.”

“Into the urban maw” in *The Economist*, February 17-24, 2018, 53-54. *accuracy of population data largely unassured



Chocolate endangered by its popularity!



A gift box of chocolates made by Mary Chocolate Co., Ltd. of Japan, 14-02-2008, Bernd, Yokohama, Japan, Wikipedia Creative Commons

Theobroma cacao has been domesticated for some 3600 years and traces of theobromine have been found in Olmec pottery in Mexico, although over two

thirds of global production today is in West Africa. Chocolate presently accounts for over \$100 billion per year on the world market, but its long history of selective breeding has led to mutations that now make the plant susceptible to disease and decreasing yields with age. Genetic material of the rare cocoa bean called Criollo, used in making some of the most expensive chocolate, is nonetheless found in many other strains and there are major concerns about lack of genetic diversity that might give rise to shortages by 2020. To counter this, 200 genomes of domestic and wild trees have now been sequenced and this work should lead to a more efficient adaptation of the plant to a variety of production sites and climate. “Lust for chocolate” by Chris Barniuk *New Scientist*, Vol. 237 N0 3159, 6 January 2018, 19.



Left: A cacao tree with fruit pods in various stages of ripening. Taken on the Big Island (Hawaii) in the botanical gardens, 27-12-2006, Medicaster, Wikipedia Common

Right: Cocoa beans in a cocoa pod, before 28 September 2004, USDA, Wikipedia Commons



Reading, England, home to “chocolate security”

The International Cocoa Quarantine Centre, located in Reading, England, is at the heart of efforts to ensure global supply – chocolate is the world’s favourite treat and we eat 7 million tonnes of it a year, with demand rising as consumption in Asian countries takes off. The lack of genetic diversity is partially due to the origin of commercial plants from a few clones made in the 1940s that have now increased vulnerability to a host of pests and diseases that love cocoa as much as people do. 30-40% of the crop is lost to disease every year and climate change may exacerbate the problem, so breeding new varieties that are hardy and pest-resistant is paramount, but the exchange of plants for research can also spread disease. Hence, since 1985, the majority of cocoa samples have made a **two-year stopover for quarantine** at the University of Reading, far from the tropical climates the plant is usually raised in. This is a great advantage – should a pathogen escape, it would not survive long in UK temperatures and there are no native plants to infect.

In the 1990s, the fungal disease witches’ broom devastated cocoa production in the state of Bahia in Brazil and output plummeted by 75%. So far, that disease has not reached West Africa, where the plant is threatened by swollen shoot virus and mirid bugs, twin plagues that slash yields by up to 40%. It is Reading’s job to graft budwood onto test mother plants to await any signs of disease or insect stowaways for the two-year security period required to certify plants as disease-free. Cuttings can then be sent to researchers around the world to create new hybrids that are resistant, high-yield and highly rated for tastiness. These can be passed on for hybridization with native crops, especially in West Africa, where many plantations are reaching the end of their productive life.

So, the world’s top ten chocolate-consuming nations – from Switzerland at 9 kg/person per year to France with 4 – may unbeknownst profit from the exotic taste of a research centre in Reading.

“Chocs away” by Alison George in *New Scientist*, Vol. 235 N°3157/8, 23/30 December 2017, 65-66



Nutella, fast and slow food wars, and *gastronomie*

Nutella was developed in post-war Italy when cocoa rationing and a hazelnut glut hit an all-time high. Palm oil is an important ingredient in the chocolate-hazelnut spread eaten at breakfast by over half of French families, with consumption amounting to over 100 million jars per year. This beloved product has been the centerpiece in a war of words and policies since the early 2010s, with Malaysian palm oil producers fighting against allegations from French authorities that the product contributes to the obesity epidemic among children and their proposals to impose a “fat tax”, often termed the “Nutella amendment”. The sweet spread, like Proust’s *madeleine*, is symbolic of a nostalgic taste of childhood, and in one

case, parents were prevented by legal decree from naming their daughter Nutella. The row has had an impact, as French Nutella producers have removed palm oil from their own version and pressure is on other brands to do the same.



Nutella, 17-12-2005, Donald, Wikipedia Commons

Nutella has escaped the fast and slow food wars which saw much opposition to the early penetration of McDonald’s in France – a 1972 launch failed and the firm returned only in 1979, but France is now its most profitable market outside the United States, having long since corrected their service strategy to include eating at table and *en famille*, while Burger King’s “All American” appeal failed and also had to be revised for a new approach.

It was in 2012 that fast food overtook traditional restaurants by value in France. This did not prevent hundreds of the world’s finest chefs gathering in their working whites to attend the funeral in Lyon of Paul Bocuse, creator of *nouvelle cuisine*, in January 2018.

The Guardian online edition, 26 January 2018, online edition



Seeds from war-torn Syria to the rescue of American farmers

Consolidation in the American seed industry and expanding farm size have seen seed variety diversity drop radically world-wide, with three-quarters of the early 1900s crop varieties declared extinct by the United Nations by 2015. This has had a dramatic impact on the American lower Midwest, where average annual temperatures are on the rise, that is, climate conditions have begun to resemble those of the arid Middle East, and crop yields are dropping by around 10% per year.



Kansas summer wheat and storm panorama, 10-07-2010, James Watkins, Wikipedia Commons

Researchers at Kansas State University carried out a drastic experiment on wheat seedlings from Kansas and surrounding states to compare their growth and resistance with that of a series of wild wheat-related grasses from a seed vault in Syria. Among their prime concerns was resistance to the Hessian fly, now steadily moving north, which injects a protein-based substance into wheat plants, transforming them into a slurry, easily sucked up and digested. The only wheat seedling “survivor” of the experiment was the Syrian contender, *Aegilops tauschii*, that has its own recent, dramatic tale to tell.

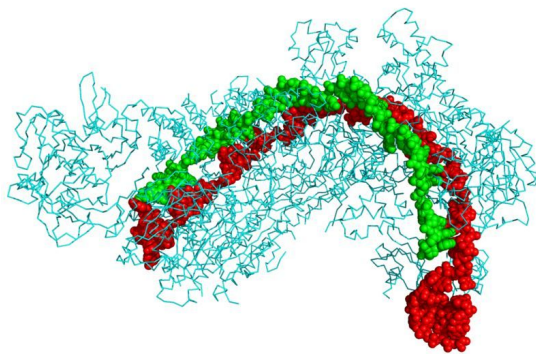
Among the plants protected in the Tal Hadya seed bank west of Aleppo, run by the Icarda (International Center for Agricultural Research in the Dry Areas), this ancient Syrian grass and other seeds were evacuated to Lebanon by researchers when Aleppo was bombarded in 2016. Among many Syrian seeds now undergoing extensive testing to aid in development of more resistant crops, *Aegilops tauschii* will have to pass formal certification and government approval, before being dispersed to US breeders of commercial wheat varieties. Since wheat has the most complex genome of any of the world’s major crops, genetic engineering has thus far not succeeded in producing new traits. Syrian farmers encouraged wild species to grow along the edges of their farms because interbreeding between the wild and domesticated species conferred the resistance and fertility that monoculture practiced in industrial farming no longer can.

From “Syrian seeds could save US wheat from climate menace” by Mark Shapiro in *The Guardian*, 6 July 2018, at <https://www.theguardian.com/world/2018/jul/06/syrian-seeds-could-save-us-wheat-from-climate-menace> (Article originally published by the Yale School of Forestry <https://e360.yale.edu/features/how-seeds-from-war-torn-syria-could-help-save-american-wheat> for photographs)



CRISPRed foods?

One of the CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) gene-editing technique developers, Jennifer Doudna, notes that “the biggest impact is going to be in agriculture”, because older techniques are far more expensive and hence monopolized by multinationals. Cheaper and easier to use, CRISPR has opened the door to an explosion of innovators world-wide, but “crispred” GMOs’ await decisions to regulate or not.



Left: Crystal structure of a CRISPR RNA-guided surveillance complex, Cascade, bound to an ssDNA target. CRISPR system Cascade protein subunits CasA, CasB, CasC, CasD, and CasE (cyan) bound to CRISPR RNA (green) and viral DNA (red) based on PDB 4QYZ and rendered with PyMOL, 27-04-2018, Boghog, Wikipedia Creative Commons

Right: Golden Rice grain compared to white rice grain in screenhouse of Golden Rice plants, 15-02-2011, International Rice Research Institute (IRRI)

This new round of GMO crop research may provide the opportunity to avoid mistakes made with earlier technologies and communication: will it be considered as a smarter form of conventional breeding or a new form of genetic modification? The most common use of CRISPR is not to add DNA from a different organism to plants and animals, but to change one or two letters, as often happens in unassisted mutation. The jury is out and the protagonists are lining up. In the United States, crops targeted by minor gene-editing are treated as normal, whereas animals are subject to regulation.

The European Union is the world's largest potential market and all eyes are turned to the EU Court of Justice, presently hearing a case on GMO definition. It will not only be a legal issue, but an issue of public policy. People from all walks of life – not only concerned as consumers – say there are four questions that deeply concern them about any scientific innovation: who wins, who loses, what are the benefits, what are the risks. Deeper public engagement on the part of science should not go on repeating “there is no evidence that GM foods are unsafe”, but reply to the question “who will benefit from this technology?”

“The second great food war” by Michael Le Page with special comment by Lesley Patterson, head of Public Engagement with Research, Oxford University, *New Scientist*, 7 July 2018, 22-23



Golden rice approved by USDA

The US Food and Drug Administration approved golden rice genetically modified to prevent blindness in undernourished children. The GM rice contains extra genes that make a vitamin A precursor, so that a single daily helping can provide half the recommended intake, as well as giving the rice its distinctive golden hue. The US is thus the fourth country to approve, after Canada, Australia and New Zealand, but the highest stakes are in the Philippines and Bangladesh, where the food could have the greatest impact.

“Golden rice gets approval in the US” in *New Scientist*, 2 June 2018, 5.



New superfoods

The first ever genetically modified food to go on sale, the Flavr Savr tomato* launched in 1994, was designed to stay fresh longer, but was discontinued after three years because it failed to be profitable. In contrast, other crops have thrived – most of the soya, and a quarter of all maize and oilseed rape grown globally are GMs. Development of genetically modified crops originally targeted farmers and agro-business concerns, but the next generation of foods aims directly at consumers, vaunting added health or flavour benefits. The Innate potato bruises less and produces lower levels of the potentially harmful acrylamide when fried than conventional potatoes, and Arctic apples do not discolour, but the big gain will be in soybean oil widely used in food catering. The hydrogenating process that made it more stable in the 1960s also produced more trans-fatty acids that increase risks of heart attacks and strokes. Now Monsanto and DuPont have produced soya strains with high oleic acid content, low on trans-fats and with a longer shelf life, a game-changer, since the US Food and Drug Administration ruled that trans-fats were to be phased out of foods.



Left: Wikipedia Creative Commons: A serving of French fries, 23-12-2016, Popo le Chien; Centre: Breads, Frühstückskorb mit Sesambrötchen, Mehrkornbrötchen, Roggenbrötchen, Schrippe und Krusti, 28-06-2008, 3268zauber; Right: Slices of Blood Oranges, undated, Silencynic

With all this widely hailed as good news, the surprise is that there is a veil of silence over most of the new generation of foods, as laws requiring GM foods to be labeled often do not apply to food prepared to be eaten immediately, as in restaurants. US regulators have ruled that plants created through alteration of their own genes, rather than addition of extra genes from other plants, will be treated as conventional foods. It remains to be seen, if the European Union will follow suit.

Meanwhile, the list of new superfoods is growing: non-browning apples, non-bruising potatoes, wheat with “good” gluten that does not irritate the intestines of people with coeliac disease, sweeter pink pineapples that accumulate lycopene, rapeseed rich in omega-3 oil that will be marketed first as fish feed and later for human consumption, high-fiber white bread from gene-edited wheat, and blood oranges with additional anti-oxidant-rich anthocyanins.

A note on food rules. European Union laws introduced in 2003 were to allow sale of GM crops, but only one is now cultivated commercially in Spain, and most member states banned cultivation outright. Imported foods with a GM ingredient over 0.9% must be labelled, but this does not apply to animal feed, imported in large quantities. In the United States, GM crops are widely grown, from maize to soya and potatoes to papaya, all on supermarket shelves, and labelling will be mandatory as of July 2018. In Australia and New Zealand, only some GM foods must be labelled. Elsewhere, regulations vary greatly, from zero tolerance in Zimbabwe and Zambia to minimal restrictions in Hong Kong.

“A new kind of superfood” by Michael Le Page, *New Scientist*, 26 May 2018, 28-32

* In the “Letters” section, a *New Scientist* reader noted that the Flavr Savr tomato paste launched in 1994 was clearly labelled as GM and quickly outsold traditional products, but that the turn in public perception of modified foodstuffs came in 1996 when cattle BSE (bovine spongiform encephalopathy) and CJD (Creutzfeldt–Jakob disease) were linked, although there was no connection between the BSE/CJD and GMs. *New Scientist*, 7 July 2018, 54.



Silence of the plants: the language of fragrance under threat



Wikipedia, honeybee pollinating a peach flower in an orchard in Swifts Creek, Victoria. August 2007; Under the CC BY-NC (non-commercial use), Fir0002/Flagstaffotos

It is well known that plants communicate with their pollinators and, now, with one another: when a tomato plant is infested with cutworms, it releases volatile chemicals into the air that induce nearby tomatoes to produce glycoside, triggering a poison to ward off caterpillars, just as soybeans use a chemical “burglar alarm” to summon the ladybirds that will fight off an aphid infestation. Air pollution is garbling this “language”, with the main culprits seemingly ozone and nitrogen oxides, from vehicle emissions, and diesel exhaust especially at fault. This interferes both with the “clarity” of plant communication (their ability to distinguish fragrance messages) and the “loudness” (the distance the messages can travel). For example, lima beans attacked by spider mites emit signals that cause other bean plants to produce more sugary nectar, which attracts mite predators. If ozone concentrations exceed 80 ppm, the beans own “emissions” are received only 20 cm away, instead of 70 cm.



Wikipedia Creative Commons, Camion Renault Magnum". - Licence GFDL. Auteur: Olivier Meyer, 04-05-2005

Of course, the same air pollution may be partially responsible for the fall in the number of pollinators all over the world, an alarm set off in 2017 when a study revealed that insects in German nature reserves had declined by 75% in the preceding 27 years. This may especially affect bees, as the common volatile myrcene is easily damaged by diesel exhaust, greatly affecting honeybees’ ability to identify their nectar plants. (Myrcene has a woody scent with a touch of carrot and is produced by many plants, including tobacco and tomato leaves.)



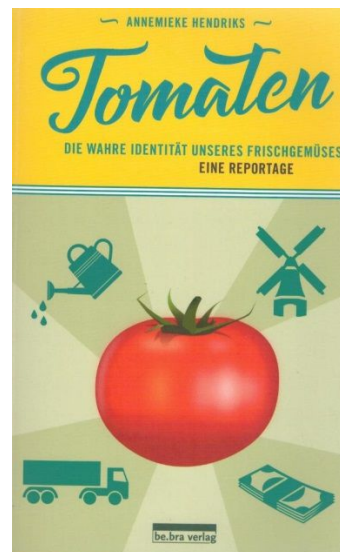
Wikipedia, Bosco Verticale towers in Milan, Italy, 21-08-2014, Author:

Is there any solution, aside from the reduction of vehicle emissions? Yes – grow more plants, especially trees to absorb ozone and nitrogen dioxide, and many urban planners are already greening cities in reply, as for the recent “forest skyscraper” in Milan with 800 trees and nearly 20,000 other plants on its sides. Other “forest” buildings are soon to come, in Nanjing and Liuzhou. NB that some plants such as oaks and poplar emit precursors of ozone and can make matters worse when mixed with city air. And what about rural areas? – one solution is to plant more flowers around field crops, in particular, petunias to attract more pollinators.

“Silence of the plants” by Marta Zaraska, *New Scientist*, 17 February 2018, 32-34.



TOMATO! Two recent books on just how hot a topic agriculture can be in a connected world



The Empire of Red Gold, in French

Jean-Baptiste Malet. *L'Empire de l'or rouge*. Editions Fayard, 285 pp, 2017.

Where do we find the convergence of Taylorism, paternalism and glass bottles? In the canned tomato, in what Malet terms “ordered capitalism” represented by Taylor, Fordism and “Heinzism”, all of them authentic pioneers with the same “imaginary”. He reminds us that the canning industry was propelled by the American Civil War and that twentieth-century wars would have been impossible to wage without canned foods. Fast forward to the Chinese military-agricultural giant Chalkis, the world’s leading tomato paste exporter in the 2000s, a “state within a state”, commanded by the so-called General Liu Li. But why did the Chinese

go into massive production of a product they did not eat, based on the machine tools for tomato transformation developed by Italians? And how does this fit into the picture of the Italian “agro-mafia”, one of the main struts of modern slavery of agricultural workers in the country, much of whose money is laundered through tomato paste and olive oil?

There are as many answers as questions in this account, often rather suspenseful, of investigative reporting. Powerful Parma industrialist-traders built factories in China *for free* and guaranteed sale of production, enabled by investment-wise Swiss bankers. This is a cunning affair: inflate the invoice for building a factory, let the Chinese use their banks to buy them, then the surplus goes into a Swiss account, a happy loop indeed, seamlessly integrated in untraceable, global capitalism.

There was for long only rare media attention to such issues in the Occident, although one of the major facilitators of operations was Henry Kissinger, through his personal contacts that opened the doors to the next step: massive export to Africa. Today, the Chinese have cut out the Italian middlemen and control 70% of the tomato paste market in Africa, with Libyans (population 6 million) eating more concentrate than Germany (80 million people). Tomato paste was revolutionized by invention of the ketchup “pod”, the single-serving packet of the fast-food world, often sold as relish for an entire meal for modest families in Africa. Today, the glut of Chinese production has generally crushed tomato-growers on the continent, many of whom have immigrated to Europe, especially Italy, where they are often held in literal captivity by the *caporali* of the agro-mafia. The Italian legal system struggles in vain against the *caporali* because laws do not touch the “high end” of the production chain: relentless pressure from the giant supermarket chains to lower production prices.

Ghana is an especially telling example of the rapid changes. The country was an early model for positive decolonialization, until a CIA-led putsch unseated Nkrumah and set Ghana on a course of food dependency. As in other countries in Africa, it has become one of the paradoxes of capitalism: total free circulation of products, all of which are the same, in different packaging. Much of the tomato paste sold there is cut with illicit additives, over which there is no control. As General Liu Li notes, today the New Silk Road begins in Xinjian and ends in Ghana.

Malet provides insight into the history of tomato products from early import by conquistadors into Europe, on to the international traders and factory builders of Parma, and the iconic development of ketchup by Heinz in the United States, where there is a special twist to immigration. During WWII labour shortages, Franklin Roosevelt’s “Bracero” program was conceived to legally open up Mexican immigration to the United States, aiming first at the agricultural sector. Later in the 20th century, farm workers’ strikes led by Cesar Chavez in California persuaded Congress not to renew the program and Heinz drew the consequences by underwriting the research that developed automation of harvesting. This is but a sampling of the information provided about the empire of red gold.



Tomatoes, the read identity of our fresh vegetables, in German

Annemieke Hendriks. *Tomaten, die wahre Identität unseres Frischgemüses, eine Reportage*. Be.bra verlag, 288 pp, 2017.

Hendriks concentrates on Europe, echoing Malet’s stark description of modern immigrant slavery in Italy, but her main focus is more widely on vegetable products, with a special place for the tomato wars between the Netherlands, with its industrialized, high-tech food production and its German neighbours, who generally can no longer compete. Former East Germany provides a telling example: the once-flourishing apple production in the GDR did not fit with EU norms, so farmers were given 8300 deutschmarks per hectare to cut them

down and not take up producing for 15 years. This is what Hendriks calls the “apple economy parable” and notes that it has spread around the world. The complex loop of agro-business and biogas production in the old East Germany has led to a “green paradox” in which the quest for renewable (especially biogas) energy has destroyed agricultural diversity and biogas fermentation residues pollute land and water.

Elsewhere in Europe, the tomato is a good indicator of comparable political and economic developments. Romania has the soils and climate for excellent growing conditions, but transport is problematic: country, and often city, lanes are sometimes passable only by horse cart, but the use of draft animals on official roads is forbidden. Romanian market gardening has been washed under by cheap northern European production, so that the Romanian tomato, once a source of local pride, has fallen into the crack between communist and capitalist ideologies. Under the Ceausescu regime, Romania intensively used Dutch garden technologies and sent their “water bomb” tomatoes on to the Soviet Union. Today, there are some signs of resilience and a few Romanian coops are making it, on a very modest level, “living in three centuries”, with animal draft, glasshouses, smartphones and... barter – my tomatoes for your walnuts.

The complex relations between the Netherlands and the rest of Europe are the palimpsest of the book, in many ways. The Netherlands is vice-world champion in tomato export, even though Spain and Italy produce more. EU market gardening subsidies clearly favour the Dutch, who are experts in navigating complex rules and request forms. This is but one reason that tomatoes from the Netherlands are cheaper in Hungary and Romania than their own home-grown vegetable.

Historically speaking, today’s high tech Dutch glasshouses sprang from Crystal Palace engineering with iron and glass plates. The Dutch added steam-heating to produce tomato, cucumber and grapes, but when Southern Europe flooded the market with grapes, the Netherlands turned to tomato and pepper for export, also counting on advanced research and development in their universities, particularly Wageningen, as well as the hegemony of their high-grade seed companies with their global reach. Indeed, tomato seed is “worth its weight in gold”, at 30 to 40,000€ per kg. Dutch seed companies control 85% of the world market for vegetables and the “Seed Valley” cluster north of Amsterdam produces around 60% of all market garden seed. On top of their control of seed export, the Dutch have been preoccupied with advances in biocontrol, especially motivated by the conviction that high cancer rates among growers was due to pesticide use. Biocontrol also means “production” – of useful insects, raising the issue of the patentability of living material.

This is where the convolutions of EU rules and administrations enters the picture, with patenting complicated by the fact that the European Patent Agency is not an EU organization but an interstate institution involving 40 countries (“do not expect decisive action”). It unfortunately succeeds in creating patent “grey zones” exploited to the fullest by an army of agro-chem legal eagles. At least, the EPA managed in 2017 to decide that all vegetal and animal “products” from biological breeding are *not* patentable.

At times, successful Dutch growers’ strategies have involved developing “brand” tomatoes like the Tasty Tom, but identifying geographic sources of foods is problematic, since even isotope analysis cannot distinguish British from Spanish tomatoes *unless they are grown in soil*, which is now an exception. The whole debate around genetically modified tomatoes dissolved, because the traditional crossing process is more effective. In any case, EU decisions are slow and often have not kept up with scientific research. Present hesitation over whether or not CRISPR technology is or is not genetic modification is a prime example of this and may be one of the shadows behind the Monsanto-Bayer merger.

Hendriks notes that European Union rules often contradict quite workable national laws and actually hinder the free circulation of workers, which is the life blood of Dutch producers, where half the work force is done by seasonals. Europe-wide, this issue is a hot one, as some three quarters of all labor agents do not respect the legal wage scale, so Poles work eight months a year in the Netherlands and import Ukrainians to work in Poland... as well as North Koreans, who come to Poland on contract to fill the coffers of their own regime. The same goes for conditions for illegal immigrants like the African, Bulgarian and Romanian workers in Apulia, whose literal slavery is underwritten by EU subsidies to make tomato production more profitable. On a more positive note, the European Union is also the greatest powerhouse for free trade, as it can absorb even overproduction at a time when national chauvinism is on the rise. Studies indicate that Germany, for example, would lose 77 to 235 billion Euros by 2025, if border controls were re-introduced, so why do politicians talk about what the EU costs and never about the profits it brings in?

It is the situation in the Netherlands, and the Dutch growers, traders and bankers who are at the heart of Hendriks' investigation. Dutch growers have little peace of mind: one out of five family businesses is endangered. The Netherlands' leading pollution footprint is from meat, flowers, tomatoes, high CO2 emissions and still too little use of renewable energy. For all their improvements in less chemical or water use, it is lost to energy consumption in heating greenhouses. The Dutch banking pillar, Robobank, lends to those who "get big or get out", so gardeners basically work for the bank. Some Dutch growers suggest it is time to think again: Germany has the best and most expensive cars, France the best and most costly wines, whereas the Netherlands has the best and least expensive tomatoes, which they literally throw away on the market. Like Malet, Hendriks emphasizes the negative role of giant supermarket chains and their demand for the lowest possible prices, which entails producers holding foods refrigerated, especially the imports that come in through Rotterdam, so that the energy consumed by that is far higher in cost than the long-distance transport. As a case in point, it is impossible to grow grapefruit in the Netherlands, but the country is the world's N°1 exporter... Why not stop production of many foods in the Netherlands, emigrate and help build up the Ukraine, Russia, India?

Dutch high-tech greenhouse builders have their eye on Russia, where food autonomy is a crucial political issue. However, the banks must be encouraged to tag along, since even Dutch growers pale at the prospect of building still more glass houses: a 1-hectare greenhouse means 1,000,000€ and you must count the same cost for the heating station to serve it. At this price, the Germans have no hope of keeping up and the Dutch have thrown in the towel on using excess heat from coal plants as non-sustainable. 9% of energy use in the Netherlands goes to greenhouses and the year-round lighting in 25-hectare glass cases consumes as much as 20,00 households.

Hendriks pays homage to those among the Dutch growers for whom ethical practices and transparency are a label of quality that has carried some of them into cooperative research on improving tomato-growing in Africa and the Near East. Such producers are also able to break away from the supermarket chains at home, but going it alone means no more EU subsidies. They maximize efficiency in land use, often reducing to 1/10th the surface area needed by Spanish growers, and some have not hesitated to move their family and business life to Spain. In Spain, the picture changes drastically – "water is politics". There, the oft-criticized, systematic cooperation among growers, greenhouse-builders, government and the banking system of the Netherlands finds its polar opposite. Spanish growers rarely use grey water (clean waste water), astounding for the Dutch. Water purification does not follow the same norms as in northern Europe, for example of waste medicines, thus blocking acceptance of some production from Spain. There is little cooperation between dry and wet provinces out of

fear of loss of sovereignty, so theft of water from nature reserves is rife and desalination projects have hardly gotten off the ground. There are at times heroic efforts on the part of Spanish townships to fight for their water rights and their growers against powerful landowners who literally siphon off their neighbours' livelihoods. Pollution in all forms is a major issue. As Hendriks remarks (with humour) in the passage on "can the tomato be sustainable?," a whale off the Almeria coast was suffocated by 17 kg of plastic foil from greenhouses and 450 million kg of Spanish greenhouse foil is washed into the sea per year. This is but a glimpse of Hendriks' investigation results and she admits that she even, if very slowly, came to like eating tomatoes. These two books have different styles of presenting timely investigative reporting and the state of present-day scientific research into tomato-ness. The only reproach is that neither has an index. Both, however, offer genuine adventure, unexpected humour, insight into the very human factors, and much information about how food gets onto our plates.

The film version of Malet's book is available in French as L'Empire de l'Or Rouge (at <https://openload.co/f/AHCzyXpGQek> for the French streaming version) and in English, as The Empire of Red Gold, by Jean-Baptiste Malet and Xavier Deleu,

While online resources are not as detailed as the Malet and Hendriks books, there are now many investigative reports available, among them, "The Dark Side of the Italian Tomato" by Mathilde Auvillain, Stefano Liberti, Jacopo Ottavia, Mario Poeta, Isacco Chiaf, mainly dealing with the relation between Italian production and the ruin of the Ghanaian internal agricultural market, especially for tomatoes, see <https://webapps.aljazeera.net/aje/custom/2014/italiantomato/index.html> or "Ghettos and gangmasters: How migrants are exploited in Italy's tomato fields" by Lorenzo D'Agostino, for CNN, March 21, 2018, at <https://edition.cnn.com/2017/12/07/europe/italy-migrant-camp-exploitation/index.html>

Be sure to check out the classic book on tomatoes and other nightshades, **Charles Heiser's The Fascinating World of the Nightshades** -> **Resources section**, "**Classics**" below (and find out how to spend a quiet evening with a potato, if you want relief from the tomato).



Animals in Museums and Beyond



Livestock Conservancy



Once a breed goes extinct, its genetics are lost to history – genetics that farmers may need in the future to combat outbreaks of disease, a changing climate, or genetic issues that arise from livestock being too closely related to each other. According to the Food and Agriculture Organization of the United Nations, one domesticated livestock breed is lost every month.

Pittsboro, NC, USA [17 May 2018] – Nearly one in five of the world’s farm animal breeds are at risk of extinction¹. The reason? They’re underemployed.

For thousands of years, farmers have carefully bred and raised diverse animals perfectly suited to their corners of the world. These animals are well adapted to local environments and are designed to produce products that meet the needs of local communities. But over the past century, farming in many parts of the world has evolved into highly specialized operations designed to produce as much meat, milk, eggs, fiber, or other products as quickly as possible in order to maximize efficiency. For example, in 1927, the average American Holstein milk cow produced less than 4,500 pounds of milk per year. In 2017, she produced just shy of 23,000 pounds of milk² – more than five times that of just 90 years ago!

While numbers like these are impressive, placing too much emphasis on productivity sometimes leads to diminishing drought tolerance, parasite resistance, mothering abilities, fertility, foraging instincts, and even flavor. Meanwhile, the populations of many slower growing but still incredibly valuable “heritage” breeds have crashed. Livestock like Wiltshire Horn sheep, Gloucestershire Old Spots pigs, and Oberhasli goats can’t keep up and have now found themselves on endangered lists of conservation organizations around the world. Although Heritage livestock and poultry may not be as efficient as mainstream breeds, they are important sources for valuable genetics and traits, protecting them from being lost. In addition to animals known for food and fiber, rare equines have seen sharp declines, particularly over the past decade. But there is still hope!

20-26 May 2018 has been designated by fifteen livestock conservation organizations around the world as **International Heritage Breeds Week** to raise awareness about the status of rare farm animals, highlight examples of how they are still relevant to family farms, and bring choice to the marketplace. Breeds like Leicester Longwool sheep, Caspian horses, Tamworth pigs, Aylesbury ducks, Silver rabbits, Spanish chickens, and more than 1,400 other breeds worldwide need our help.

What’s the best way to support these breeds? By giving them a job! Many livestock conservation organizations have compiled directories to help consumers locate products from breeds historically used in their local regions. By purchasing eggs from Heritage chickens, pork from Heritage pigs, milk from Heritage cattle, or wool from Heritage sheep, you encourage farmers to raise more animals, and can discover the difference in the kitchen and on the loom for yourself. According to acclaimed French chef and proponent of Heritage breeds, Antoine Westermann “an animal that has pure roots, the life, and food he deserves, offers it back to us in his meat.” By establishing their spot in the marketplace, biodiversity for these Heritage breeds is secured.

To learn more about International Heritage Breeds Week, how you can get involved, and where to locate Heritage breed products in your local area, visit HeritageBreedsWeek.org or

Contact: Ryan Walker, Marketing & Communications Manager

rwalker@LivestockConservancy.org

Sources:

1 FAO. (2015). *The Second Report on the State of the World’s Animal Genetic Resources for Food and Agriculture*. Retrieved from www.fao.org/3/a-i4787e.pdf

2 USDA- National Agricultural Statistics Service (2018). Retrieved from https://www.nass.usda.gov/Publications/Todays_Reports/reports/mlkpd18.pdf



Fête de la Vache Nantaise / Nantaise Cattle Festival 7-9 September 2018 in Dresny, Plessé, France



A very large, popular and free meeting, the Fête de la Vache Nantaise is a national-level event for local farming breeds and agriculture attracting some 50,000 visitors. Since 1997, the Fête has brought together actors from farming, associations and businesses. It is a crossroads of encounters between consumers and the world of small farming. Today, it emphasizes the economic and ecological viability of local animal breeds and demonstrates how well they can fit into short-distance economies in the areas they are native to.

The Fête is organized around **three villages** (Local Breeds, Solidarity Initiatives and the Honorary Guest) that deal with societal issues globally and coherently by reaffirming that citizens and consumers can be effective actors in their societies. For this 8th Fête, it is our honor to welcome the **Basque Pig** and its region, the Basque Country, with all the initiatives that are being developed there.

The Local Breeds Village will be organized around **5 hubs**:

- ❖ Regional breeds conservatories and local races
- ❖ The Theatre of Tastes with demonstrations promoting local products
- ❖ Setting-up Business House to promote dialogue between the various actors involved in setting up a farming-related business and stock breeders
- ❖ Human/Animal Relations Hub
- ❖ Animal power: this national meeting brings together the actors and stakeholders involved in developing animal power and demonstrating its modernity to the general public. A key factor in promoting local breeds through their work capacities, animal power is presented as a professional, future-oriented activity with its own techniques and innovative, high-performance equipment.
 - ❖ Equipment presentation stands
 - ❖ Demonstration area (market gardening, wine-growing and logging)
 - ❖ Weekend meeting for professionals (with the Alsace Ecomusee, the Farmers' Workshop and jugglers)
 - ❖ Animals represented include cattle, horses, mules and donkeys.

For more information, see <https://www.vachenantaise.fr/> and contact@vachenantaise.fr



JPPM 2018: Of Animals and Humans / 17-18 June



The JPPM (Journée du Patrimoine de Pays & des Moulins) is a group promoting French heritage in all its forms and selects a theme for each of its yearly event days proposing information to museums, associations and individuals who wish to participate and helping them to organize events. Among the subjects proposed for Of Animals and Humans: buildings and shelters (including dovecotes and beehives), animals in art and literature (think of La Fontaine fables), animals in legend and religion, useful animals (from transport to guide dogs to stock-breeding), animals in sports and games, animal by-products and foods, animal biodiversity, animals and the landscape. For more information, contact Pierre Del Porto pierre.delporto@gmail.com



Comments from Bob Powell, with Barbara Corson and Ed Schultz: blinders, location, polling, breeds



This was taken at Whinnyfold, Cruden, Aberdeenshire, Scotland in 1895. It shows Mr Alex Davidson 'plowing' with his oxen in harness being driven like horses. He's actually using a 'drill' or ridge plow towards either planting potatoes or sowing turnip seed. The latter is done on the top of the ridges.



The second is again in the 1890s. The two oxen in harness are being driven trace in tandem and pulling a Ransomes 'Newcastle' plough. Again, it is the harness which caught my interest. Unlike the previous picture, this team is being driven by the boy. At first, I thought this picture was from Sussex on the south English coast, however, there are no stone walls like that down there. It could be the limestone Cotswold country of the south-west. If you look at the field behind the plowman you can see heaps of dung waiting to be spread out and plowed in. Bob Powell

Bob added the following two photos, after Barbara Corson and Ed Schultz sent in comments and questions on the first two pictures.



Banffshire draft bullock



Cirencester Park Oxen

Barb suggests that, in the first photo, the hornless cattle may have been naturally polled and the beast in the furrow might have an udder. Bob's answer to is that they may have been dehorned, as the offside animal looks more like a Beef Shorthorn, and they were pretty dominant at that time. See the attached picture from the same Banff area in the 1930s. Bob has other Scottish images where the cattle are hornless or virtually hornless, but are not Aberdeen Angus. And yes, the nearside animal might have an udder, although it is very difficult to see. It would not be unknown for a cow to have been used in draft.

Barb's second observation was that the "lead" ox does not appear to have blinders on, but the "wheel" ox does. It is tempting to think it's because the boy (teamster) would drive the two from a position behind the lead ox and in front of the "wheel" ox.... in which case the lead ox would not be able to see the boy, if wearing blinders. And Bob's answer:

Again, your logic on the wearing of 'blinders' in this case sounds pretty well on the money. However, to contradict that, I have other pictures where the lead animal is wearing blinkers. See attached (at Cirencester Park). It's like the argument over whether horses need blinkers or not. Perhaps it's as simple as how they are trained or the personal preference of the stockman? There was lots of related debate in the past, particularly here in Scotland in relation to horses. Ed Schultz' question also concerns blinders, as he wonders whether the nigh ox has his eyes covered. Bob's answer is no: the photo is not that clear but the way the plowman's line has pulled back on the halter creates that kind of illusion. Interestingly none of the photos in Bob's collection have oxen wearing blinkered bridles... unlike England. Contact Bob Powell at bob.powell53@btopenworld.com



Thomas' hames from Matt Schofield at Genesee Country Village



Thomas is a pretty decent animal and works well for me. The wooden hames that he is wearing were made from ash. Bob Powell sent me a paper pattern of a hame from the Fenland, Cambridgeshire, England. He grew up in that area and has a great love for the working of heavy horses. Since my area of Western New York State was heavily influenced by English and German farmers, I decided to make Thomas that early style rope harness. Bob was a great help through the process. I still need to make a proper leather strap for the bottom of the hames, but they are working well for now. J. Matthew Schofield, Manager of Historic Trades and Agriculture, Genesee Country Village and Museum mschofield@gcv.org



Using an upside-down horse collar on cattle

From Island Farm located on Roanoke Island on the coast of North Carolina.

Our mutual friend, Ed Schultz, shared some photos with you of our bit-trained ox, Charlie. I realize just how unusual it is to train an ox in this way and how fascinated people are to see or hear of it, particularly folks who work with oxen in the more common and traditional way. From what I've been able to learn, this was a sort of backwoods tradition in America that, while rare even in the old days, was not unheard of. Since working oxen in general are more rare today, this method is even more so. Gene Staples, Site Manager, Island Farm



By kind permission, Roanoke Island Photography

These pictures from **Gene Staples** and **Ed Schultz** gleaned some interesting reactions from other horsemen and ox-drivers.

First, a comment from **Emmanuel De Meulenaer**, a Belgian horse-master, who writes:

In our area we used to drive the cows like a horse, with a choke rein and bridle. It's funny to see that he turned around an American and a Swedish collar to fit the animal and to have the pulling point on top. We had special cow collars and they are easy to recognise.... with the pulling point 1/3 from the top and not 1/3 from the bottom.

Rolf Minhorst, the German specialist on development and use of the 3-pad cow collar, has already written contributions for AIMA Newsletter readers (see on the Estonian *look*, the shaft bow in N°11). His comments and suggestions are summarized here.

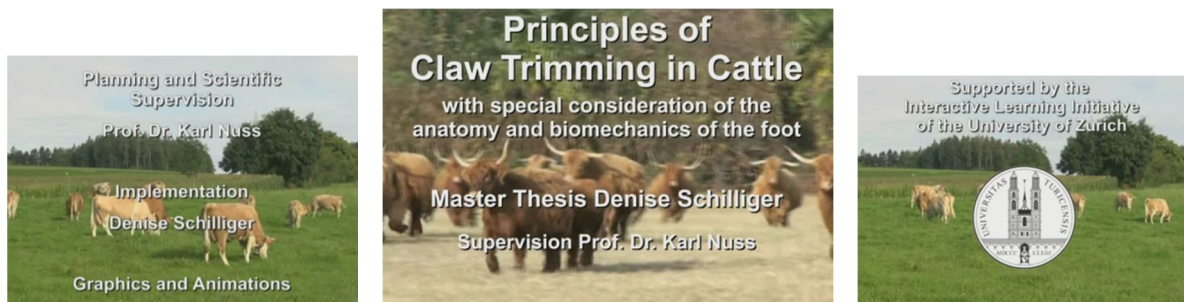
These photos provide an opportunity to comment on the difference between cattle and horse anatomy and careful attention to the morphology of a cow shows why an upside-down horse collar cannot really work well in cattle. A cow only pulls well with its neck and shoulders,

whereas a horse pulls with its wide chest (and shoulders). If you look carefully at the picture with the wagon, you can see that the collar is too wide, so that it slides around and down, as well as exerting too much pressure on the bow (shoulder) joint. Also, the ends of the drawbars should be slightly bent outwards. Here in the picture, they rub on the upper limb. In the picture with the lady, the pad on the neck is too narrow and presses in, because the collar does not fit, again putting too much pressure on the shoulder joint.

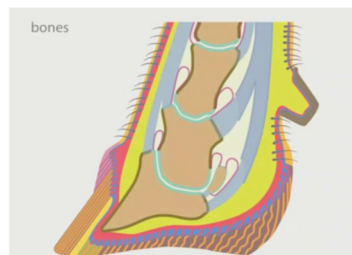
Our thanks to Ed, Gene, Manu and Rolf for this first exchange, in hopes they will continue with more pictures and information on this unusual solution to cattle draft.



Principles of Claw Trimming in Cattle



To all those concerned by cattle foot care, the University of Zurich, Department of Farm Animals, has an outstanding free-access film online *in three languages*: English, French and German entitled “**An Educational Film on Functional Foot Care and Trimming in Cattle**” by Denise Schilliger *et al*, supervised by Dr. Karl Nuss, at <https://tube.switch.ch/videos/2e60cbc0> Even if you call on your veterinarian for any hoof-trimming, the general principles of good health are clearly outlined for carers in any situation, including museum work, the slow-motion frames and detailed graphics are highly educational, and the film is a delight to watch.



Resources



Gourmand Awards Winner French Regional Breads by Mouette Barboff



NB this new book on bread is published simultaneously in French and in English: French Regional Breads / Pains de Boulangers. From the publisher's presentation:

France is a nation of breads and bakers. The Parisian baguette, crisp, golden and fragrant, is the best known and most iconic of all French loaves. But every region of France, and virtually every town and village, boasts its local speciality. The range of French regional breads is vast, including such evocative names as le pain brié du Calvados, le pain plié de Morlaix, le chapeau du Finistère, la fouée de Touraine et d'Anjou, le tordu du Gers et de Gascogne, le portemanteau de Toulouse, le seigle de Thiézac, la fougasse du Midi méditerranéen, la michette de Provence, la main de Nice, le pain de Beaucaire, le pain bouilli des Alpes, le sùbrot d'Alsace, le cordon de Bourgogne, la tabatière du Jura, le pain polka, among many others. Each of 24 regions is profiled, including a conversation with an area baker discussing regional history, traditions and techniques, as well as a recipe. Richly illustrated with archival, instructional, and finished bread photography, this book will appeal to true Francophiles, and serious and professional bakers.

For a true appreciation of these breads in all their rich variety, we can do no better than listen to the words of those who bake them. It is these craft bakers from all over France who stand at the heart of this book. As they reflect on their historic craft, on the part that they play in their communities, and on the traditions and secrets of their bakeries, their love of their work and of their bread shines through with an almost religious devotion; there is something of the intimacy of the confessional, meanwhile, in their stories of their working lives, and of their nightly vigils alone with their dough and their ovens.

Mouette Barboff holds a doctorate in social ethnology from the Ecole des Hautes Etudes en Sciences Sociales (EHESS) in Paris. She is internationally recognized for her work on bread. Mouette Barboff mouette.barboff@wanadoo.fr



Archaeo Cutting Tools Website / André Marbach

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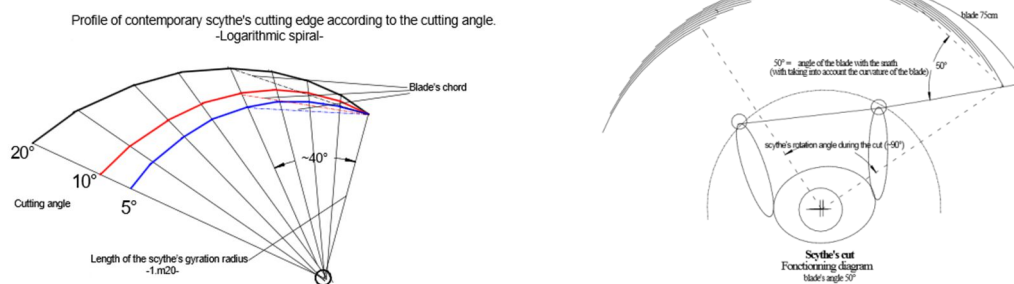
The evolution of bladed cutting tools has played a vital role in the development of agriculture. Can we have a complete overview of these tools by an ethnological and historical analysis alone? That is the question. A complete technical study regarding the tools appears to be indispensable to retrieve their operating characteristics and properly situate their evolution. In any case, the aim of this essay is to give a new insight on these agricultural bladed cutting tools.



Les très riches heures du Duc de Berry (1340-1416)

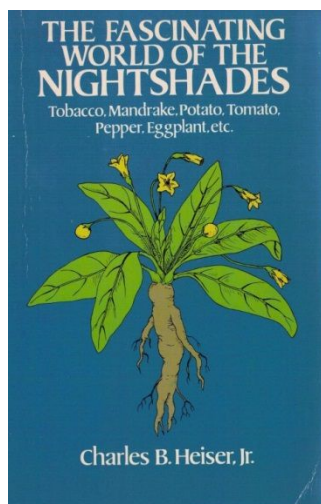
André Marbach, Post-Doctoral Research Associate at “Centre de Recherche en Histoire” at the University of Metz-Nancy (France), has put part of his extensive work online concerning tillage instruments and most particularly sickles, scythes and other bladed / handled implements. His specialty is the Gallo-Roman scythe in its various avatars and he has made a nearly exhaustive analysis of blades from museum collections and art works. This research is especially meant to be open-access and he invites interested readers to comment on the technical points discussed. André Marbach amj.marbach@wanadoo.fr

As an example the case of some scythes.



Classics

Tomatoes & Co: The Fascinating World of the Nightshades

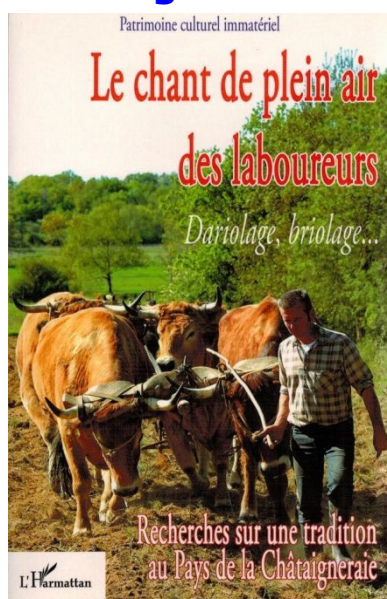


If you now want to know more about tomatoes and their close kin from a quick look at their botany, more on their economic botany and quite developed examination of their cultural history, dip into Charles B. Heiser's *The Fascinating World of the Nightshades*, Dover Publications, New York, 1969, 1987, 200 pages, black and white illustrations. The book covers tomatoes, as well as well as

other nightshades (the Solanaceae), with the Latin genus name *Solanum* referring to the quieting effects, even permanent in certain cases, of some of the members. The family has more than 75 genera and some 2000 species, including popular food plants such as peppers, eggplant, tomato and lesser knowns whose use is mainly restricted to tropical America – husk tomatoes, tree tomatoes, lulos and pepinos. Heiser also takes a turn examining the more risky part of the family, from mandrake to nightshade and on to thorn apple, henbane and belladonna and that grand seducer of humankind, tobacco, considered both as one of the New World's great gifts to the Old, or the Amerinidians' revenge. The book is full of humor throughout, whether speaking of poison or petunias, and Heiser has a classic passage on **how to spend a quiet evening with a potato** that will quiet the nerves of anyone worried about the international trade in food plants and their derivatives.



Ox-chanting in France and beyond (French)



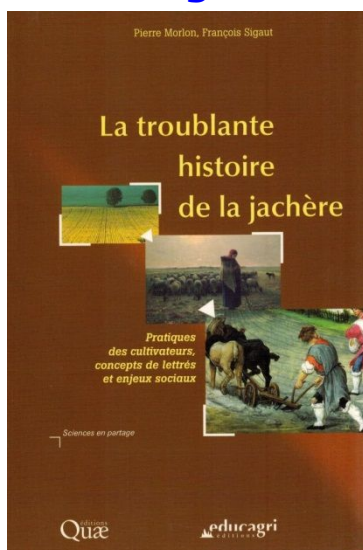
Ox-chanting is in no way limited to France, although it is generally agreed that it is a phenomenon mainly of the plains and not the hills or forested areas where oxen were once widely used and still are today, in a few areas that are not amenable to tractors. As an Alsatian hill-farm oxdriver says, you can't use a goad and sing, when you're trying not to fall over or let the goad get caught in the trees. His counterpart in Ariège noted likewise that you do not need an ox chant – mainly to encourage the animals when working long rows – if they hardly have time to notice they are ploughing before they have to turn around, on a small farm.

Called by many names in French dialects – briolage, dariolage, and celebrated by Georges Sand in her 1846 work *The Devil's Pool*, ox chants were sung in a variety of ways, often quite surprising for European ethnomusicologists with their mixture of highly individual techniques, at times including imitations of birdsong and ribald commentary or plaintive airs. The eighteen articles deal with often highly localized traditions in metropolitan France such as the Berry, the Vendée *bocage*, Brittany, or in the overseas Guadeloupe and on to Italy, Belgium, Portugal and Spain, whose practices spread to Latin America. Ethnomusicological analysis takes up a large part of the book, as does examination of the practices in the context of human-bovine relations and the possible connections with other work songs. The colloquium was accompanied by chanting demonstrations, both indoors and while working outdoors, to add to the historical recordings on the DVD provided with the volume, eighty-eight tracks from the Alps through Europe and on to Cambodia, China and Yemen.

Le chant de plein air des laboureurs. Dariolage, briolage... (Proceedings of the Colloquium) Actes du colloque au Pays de La Châtaigneraie. Paris, L'Harmattan, with the collaboration of Vendée Patrimoine-EthnoDoc-Arexcpo-OPCI, 2012, 399 pages, b/w illustrations including music transcription and DVD. The website for collections also provides numerous other resource materials: <http://chantdelabour.forumcrea.com/>



An “unsettling” history of fallowing practices (French)



As the authors ask, who today has any idea about what fallowing practices (French *jachère*) once actually involved? The word is now applied to its exact opposite – spontaneous growth that farmers no longer even have the right to get rid of, whereas it used to mean a whole programme of tillage techniques to clean the soil and prepare for sowing. Scholars and city folk contributed much to this drastic shift in meaning and

this was taken up willfully by landowners – “instrumentalized” as the authors remark – in their efforts to extract the maximum of land use fees. Much emphasis is placed on the diversity of terms and techniques, the where, why and how. There is analysis of fallowing in tropical contexts, European CAP policies and a discussion of where agriculture is going in Europe today. The second part of the book provides an in-depth survey of historical texts from the sixteenth to the early twentieth centuries. (There is also a brief discussion of this point in French available at <http://mots-agronomie.inra.fr/mots-agronomie.fr/index.php/Jach%C3%A8re>)

Pierre Morlon, François Sigaut. *La troublante histoire de la jachère. Pratiques des cultivateurs, concepts de lettrés et enjeux sociaux*. Dijon and Versailles, Educagri Editions and Editions Quæ, 2008, 325 pages, b/w illustrations.



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