RIHN Pre-Symposium

Bridging Times and Seas:

Historical landscape change on the shores of Northern inland seas

19 October 2005, Kyoto

Co-organised by:

Associate Professor Junzo UCHIYAMA

(Leader of Project 4-4FS: "Neolithisation and Modernisation: Landscape History on East Asian Inland Seas")

Professor TakakazuYUMOYTO

(Leader of Project 5-4PR: "A New Cultural and Historical Exploration into Human-Nature Relationships in the Japanese Archipelago")

RIHN Inaugural International Pre-symposium,
Section "Bridging Times and Seas: Historical Landscape Change on the Shores of Northern Inland Seas"
18-20 October 2005, Kyoto

This pre-symposium is the first symposium in a longer row of pre-symposiums and symposiums dedicated to the inauguration of the new building of the Research Institute for Humanity and Nature. The aim of the symposium is to heighten the awareness of the human culture concerning global environmental problems. During this symposium different projects affiliated to this institute will hold sessions, inviting guests from all over the world. The present session will be hosted by two projects of the institute: "Neolithisation and Modernisation in East Asia: The History of Environmental Development at the Great River Façade" led by Junzo Uchiyama and "A New Cultural and Historical Exploration Into the Human-Nature Relationships on the Japanese Archipelago" led by Takakazu Yumoto.

The symposium series will be concentrating on the landscape history in two large regions, which tentatively have been called with a common nominator "Northern inland seas", that is the rim of the Japan Sea and the East China Sea and the shores of the Baltic and Northern Seas. The speakers of the symposium will include academics from many different fields, both archaeologists and scholars of modern landscape, scientists and researchers in humanity. The aim of the series is to give a multifaceted look into the landscape history in given regions at different instants of time without excluding neither physical nor mental part of the landscape.

It is a hypothesis of the organisers that human history has seen two major periods of explosive changes in landscape, the first of which was the so-called Neolithisation, characterised by the appearance of agriculture, permanent settlements and long distance trading, and the second the period of Modernisation when the patterns established during the Neolithic age where reinforced and explosively developed. Keeping this in mind, the symposium series would try to add some more depth into our knowledge of landscapes and their change patterns both during the period of the widely acknowledged "traditional" and "modern" landscapes, as well as during the long period in human history preceding the appearance of permanent settlement. Inland seas have been a major means of trade and intercultural communications all through the history, therefore we can expect to find a considerable trans-cultural coherence and many similarities in the change patterns between the cultures located at their shores.

The first symposium in the row would mostly serve to introduce the settings and main issues to be developed further in future meetings. The speakers are expected to give a speech on an issue they consider crucial for the landscape or its change mechanisms in any of the aforementioned regions, paying special attention to the historical dimension of the issues at hand.

The time allocated for each speaker will be roughly 20-25 minutes. The organisers welcome the titles of your presentations by the end of July. The abstracts of 300-500 words (can include figures) should be sent by August 31st by E-mail to Kati Lindström (kati@chikyu.ac.jp). The symposium hall will be equipped with PPT overhead and slide projectors. Please notify us if you need any special equipment for your presentation.
The presentations will be published as symposium proceedings.

Chair: Takakazu Yumoto

PROGRAM

9.30 Welcome speech by T. Yumoto (RIHN) **and J. Uchiyama** (RIHN)

9.55-10.25 Kalevi Kull (University of Tartu, Tartu, Estonia)
Cultures of leaving no trace: the case of wooded meadow

10.25-10.55 Takakazu Yumoto (RIHN, Japan)
Landscape modified by deer: recent rapid changes in the Japanese vegetation

10.55-11.25 Hannes Palang (Tallinn University, Tallinn, Estonia)
Layered landscapes

11.25-11.55 Tomoya Akimichi (RIHN, Japan)
Landscape in ecological history: why are trees left in the rice field?

Lunch

13.00-13.30 Simon Kaner (The Sainsbury Institute for the Study of Japanese Arts and Cultures, UK)
The evolution of landscapes over the long term: perspectives from Britain and Japan

13.30-14.00 Junzo Uchiyama (RIHN, Japan)
Why did shell-middens disappear?: culture roles in the landscape shift in prehistoric foraging societies

14.00-14.30 Kati Lindström (RIHN, Japan)
Mental and physical relief in landscape: Eight Omi Landscapes and the environmental perception of its present inhabitants

14.30-15.00 Oki Nakamura (Kokugakuin University, Tokyo, Japan)**, Seiji Kobayashi** (Tochigi Junior College, Tochigi, Japan)
Landscape studies in Japanese archaeology

Break

15.15-16.30 Discussion

17:30 Speech by Director-General Hidaka

18:00-20:00 Reception for all the participants of the pre-symposium

Kalevi Kull
Department of Semiotics, University of Tartu, Tartu, Estonia
kalevi@zbi.ee

Cultures of leaving no trace: the case of wooded meadow

Both traditional and contemporary management of ecosystems include two types of impacts – possibly reversible and irreversible one. The distinction between (possibly) reversible and irreversible ecosystemic changes is important, although not simple (because due to the natural changes in ecosystem, this is a homeorhetic and not a homeostatic reversibility). The reversible impact would result in no remarkable change in species number or species distribution (neither reinforced extinction, nor invasion of alien species) and in no remarkable change in the openness (or closure) of any element cycle.

The management that basically cuts regularly and partially only local populations and includes a short-distance redistribution of organisms and elements (and does not include the alteration of relief or establishing extensive buildings of very stable material), appears to be reversible. If such management creates an additional spatial or temporal diversity and harvests particularly the dominant or frequent species, it can result in a local increase in biodiversity.

The latter appears to be the case in a traditional type of management of plant communities in the forest biome that has created wooded meadows — common in the cultural landscapes until the late Middle Ages. Wooded meadows are poly-functionally used mosaics of forest patches and meadow spots that could supply an individual farm (or a group of farms) with all food and other resources in a long-term basis without any depletion.

Human capabilities to (re)arrange (cultivate) things would primarily not distinguish between the reversible and irreversible arrangements. Or if they would, as, e.g., in the cultures of the Modern Age, the reversible changes have been evaluated more highly than the irreversible ones. A paradigmatic change in the evaluation of reversibility (and accordingly of forgetting, non-cumulativeness, temporality, etc.) can be seen as a distinctive characteristic between the Modern and Post-modern Ages in the ecosystem management as well as in a culture as a whole.

Cultures of leaving no trace: the case of wooded meadow

Kalevi Kull
Department of Semiotics
University of Tartu
Estonia
kalevi@zbi.ee

A pioneer of Japan vegetation research, Carl Maximowicz studied at Tartu University, Estonia
Described flora of Japan, working in Japan 1859-1864

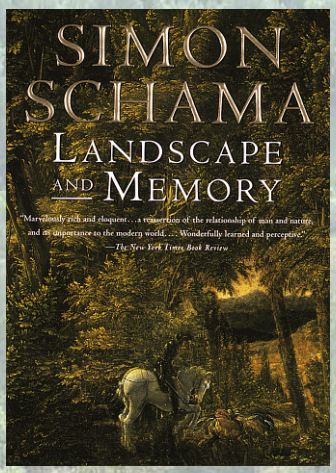

Carl J. Maximowicz

"Whichever subject we might choose from the chain of animal beings, we will always find another *Umwelt* constructed around it, an *Umwelt* evincing everywhere traces of the subject, for every subject is the constructor of its own *Umwelt*."

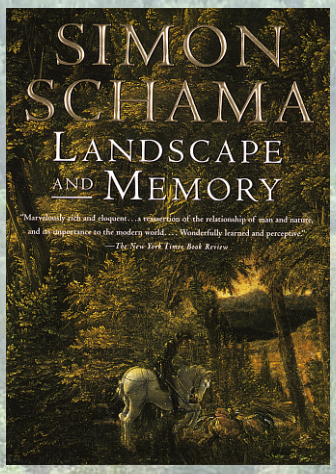
Jakob von Uexküll,
Bedeutungslehre
1980 [1940]: 335.

- "[…] body and life are the center of ourselves and they expand into the environment from the center. As such it is a kind of field."

Kinji Imanishi,
A Japanese View of Nature
2002 [1941]: 28.



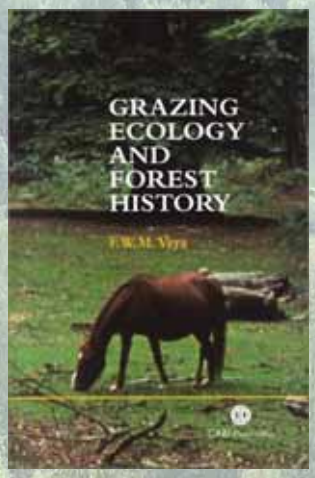
- "Much of the forest, even in the early Middle Ages, was already being managed as a special kind of micro-economy for its inhabitants. Hardwoods were cut at regular 12-year intervals 4-6 feet from the ground, sufficiently high to prevent deer from eating the new shoots. The base 'stool' would then be left to regenerate itself rapidly into the kind of light timber that could be used to meet all manner of essential needs: fencing, wattling, tools and implements. The result was the underwood, or coppice, that was the distinctive mark of the medieval forest and which in a very few locations [...] can still be seen in England...



- ... In contrast to the most ancient forests of Germany and Poland and to the conifer woods of the Scottish Highlands and the oak forests of the English aristocratic estates – all products of the 18th and 19th century crazes for picturesque and Romantic 'improvements' – these *ancient woodlands seem thinner and almost patchy, with swathes of grassy meadow and wild flowers blooming between pollarded and truncated broadleaf trees*. The exact opposite of what is now considered to be the ideal norm of a forest habitat – the untended wilderness – they have light and space and variety: a working room for an authentic woodland culture." [Schama 1995: 143]

- Recent evidence suggests that *grassland-forest mosaics* have been prevalent long *before the onset of human agriculture*. We suggest that the creation of infield meadows and outland grazing (during the Iron Age) increased the amount and spatial predictability of grasslands, *resulting in plant communities with exceptionally high species densities*. Thus, distribution of plant species in the present-day landscape *reflects historical land-use*. This holds also when traditional management has ceased, due to a slow response by many species to abandonment and fragmentation. The distribution patterns are thus not in equilibrium with the present habitat distribution.

Eriksson, O.; Cousins, S.A.O.; Bruun, H.H. 2002. Land-use history and fragmentation of traditionally managed grasslands in Scandinavia. *Journal of Vegetation Science* 13(5): 743-748.



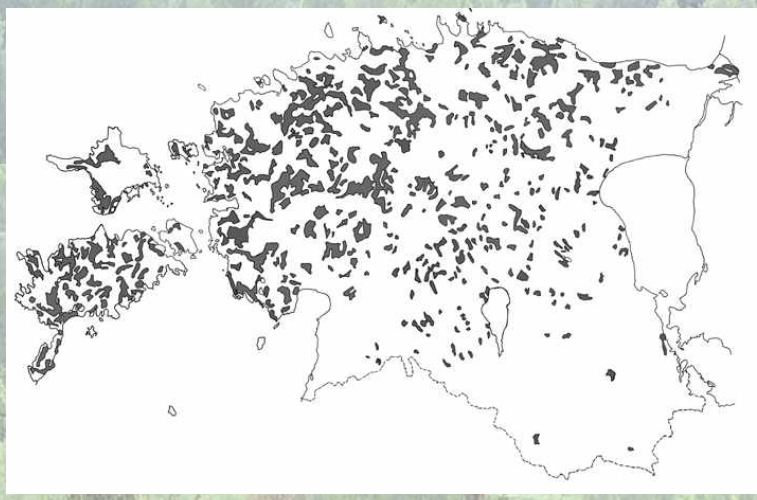
- Distribution of oak and hazel – the species that do not regenerate under dense canopy.
- Role of large herbivores in preserving forest gaps - aurochs, tarpan, bison, red deer, elk, roe deer, beaver, wild boar.

Wooded meadows

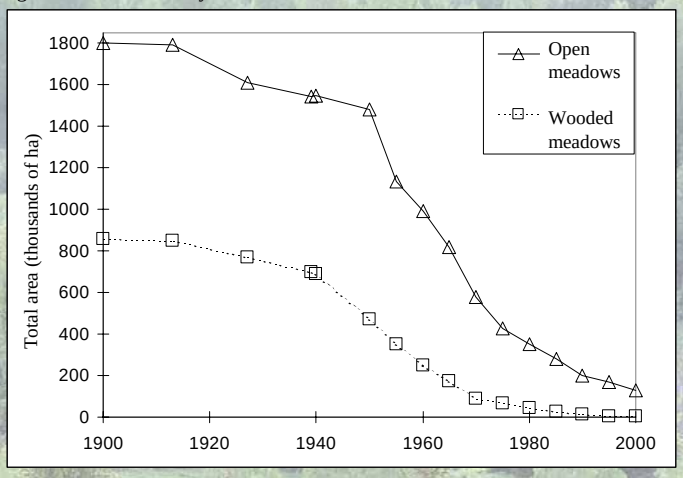
- traditional seminatural ecosystems
- example of sustainable management, with a very long-term and stable multifunctional use of land
- *sparse natural stands with an annually mown herb layer*

- Recent distribution of wooded meadows in Europe –
- Western Estonia, islands of Baltic Sea (Saaremaa, Gotland), southern Sweden, few examples also in Carpaths, Pyrenes, lower Alps

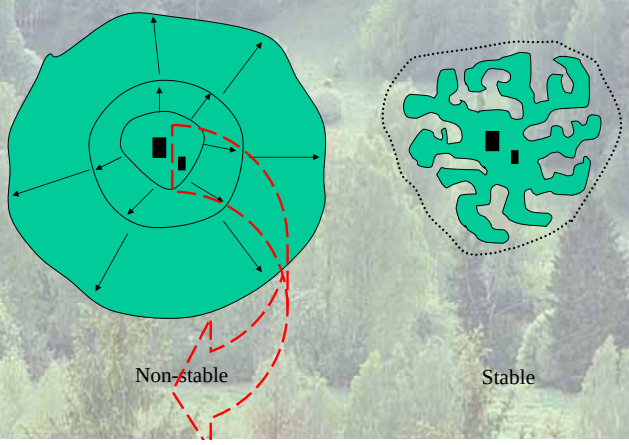
The distribution of wooded meadow areas in Estonia before the WW2



The area of semi-natural grasslands throughout the 20th century in Estonia



Dynamics of tree-cutting



Multifunctional usage of wooded meadows

- Fuel (firewood)
- Building material
- Commodities (wood for making various tools)
- Animal food (hay, leaf fodder, pasture)
- Hunting (field for game)
- Food (honey, hazelnuts, wild apples, mushrooms)
- Medical herbs
- Sites for rituals
- Esthetic values (views, colours, birdsongs)

"Neolithic"

"Medieval"

"Modern"

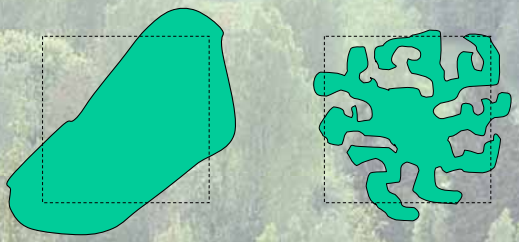
"Post-modern"

Number of vascular plant species per square meter

- Forest 5…15
- Acid soil open meadow 15…30
- Neutral soil open meadow 20…40
- Alvar 25…50
- Wooded meadow 35…70 [80]

Total number of species (esp. insects) is in a good correlation with the number of plant species

- Diversity can be estimated via the total sum of borderlines per area.



- Laelatu wooded meadow – the hot-spot of species density (max 76 vascular plant species in a sq m)

reversible *versus* Irreversible rural cultures

- **mesolithic** Firewood, bee-keeping
- **medieval** Husbandry, fencing
- **aftermodern** Mowing for biodiversity [& biofuel, & replacing sports??]

- **Neolithic** Mowing
- **Modern** Cultural meadows

no expansion	Expansion
closed	Open
few traces	Many traces
relatively stable	Non-stable
reversible changes	Irreversible changes

Acknowledgements

- Junzo Uchiyama
- Kati Lindström
- Research Institute for Humanity and Nature, Kyoto, Japan
- Toomas Kukk a. o. colleagues in Tartu, Estonia

Related publications

- Kull K., Zobel M. 1991. High species richness in an Estonian wooded meadow. *Journal of Vegetation Science* 2(5): 715-718.
- Kull K., Zobel M. 1994. Vegetation structure and species co-existence. *Folia Geobotanica et Phytotaxonomica* 29: 433-437.
- Kukk T., Kull K. 1997. Puisniidud [Wooded meadows]. *Estonia Maritima* 2: 1-249.
- Ingerpuu N., Kull K., Vellak K. 1998. Bryophyte vegetation in a wooded meadow: relationships with phanerogam diversity and responses to fertilisation. *Plant Ecology* 134(2): 163-171.
- Sammul M., Kull K., Oksanen L., Veromann P. 2000. Competition intensity and its importance. *Oecologia* 125(1): 18-25.
- Sammul M., Kull K., Kukk T. 2000. Natural grasslands in Estonia: Evolution, environmental and economic roles. In: Viiralt R. (ed.), *Conventional and Ecological Grassland Management*. Tartu: EAU, 20-26.
- Kull K., Kukk T., Lotman A. 2003. When culture supports biodiversity: The case of the wooded meadow. In: Roepstorff A., Bubandt N., Kull, K. (ed.), *Imagining Nature: Practices of Cosmology and Identity*. Aarhus: Aarhus University Press, 76-96.

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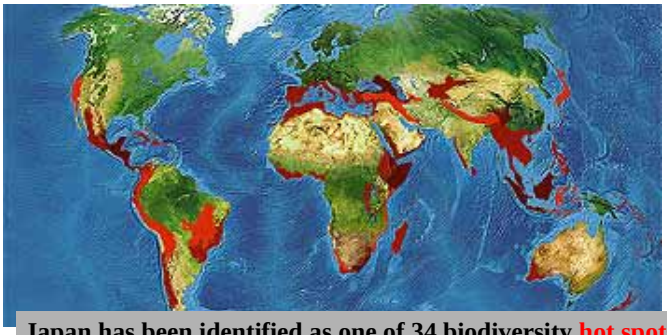
Landscape modified by deer: recent rapid changes in the Japanese vegetation

Recently, deer population (*Cervus nippon*) has expanded widely and densely in almost all over Japan, except for snowy area. Not only agricultural and forestry damages caused by deer browsing have increased, but also natural vegetations including primeval forests in World Heritages, e.g. Yakushima Island, Shiretoko Peninsular, Mt. Ohdai-ga-hara, are suffering from serious changes owing to the growth of deer population.

Since the Neolithic Age in this Archipelago, deer have been coexisting with plant communities as well as human being. Although severe damages to agricultural crops by deer were recorded in the historical ages, there has been no evidence that deer changed natural vegetation considerably, with several prominent exceptions.

Japanese wolves (*Canis hodophilax*) were extinct in 1905 in Honshu, and the other species, Hokkaido wolves (*Canis lupus hattai*) in 1896 in Hokkaido. People in the pre-modern period in Japan regarded wolves as guardians of the farmland as wolves attacked deer and wild boars. The reason why wolves in Japan were extinct still needs arguments. The number of deer population seems to have fluctuated heavily and to be almost at the minimum level at the beginning of 20th century in Honshu and Kyushu, so that wolves may have lacked of main food. Many wolves could die out owing to disease as distemper and hydrophobia introduced with Western dogs. And more, Japanese government encouraged hunting wild wolves because it regarded wolves as harmful animals for dairy farmers. Anyway, since the extinction of wolves, only human being has been acting as the top predator in Japan. However the number of hunters in Japan has rapidly decreased after 1970s. It must be the reason why the deer population breaks out recently.

The other important matter concerning to deer population is forestry policy of Japanese government. During 1960-1980, Department of Forestry urged to clear up natural forests and to replant useful conifers, *Cryptomeria japonica* and *Chamaecyparis obtuse* in all over Japan. Those forests of coniferous plantation will not be able to accommodate a number of mammals. But still the reliable data are not enough for it.
This presentation will show the researches on deer and forest, addressing the following questions: 1) Could be recent rapid changes on natural vegetation attributed to deer? 2) Has deer population increased considerably and why did it happen? 3) Should we control the deer population artificially even in natural reserves including World Heritages?



Japan has been identified as one of 34 biodiversity hot spots
-the richest and most threatened areas of the world-
by Conservation International.

The total area of those hot spots comprises only 15.7 % of Earth's land surface, but no less than 50 % of all plant species and 42 % of terrestrial vertebrate species packed into them.

Japanese Archipelago has been extremely densely populated since the Neolithic Age, and most of the natural environment has been strongly influenced by human activities.

However, in spite of the intensive intervention by humans, there is still a rich biota, which include an abundance of indigenous plants, terrestrial mammals and freshwater fish.

紀伊半島の動物たち

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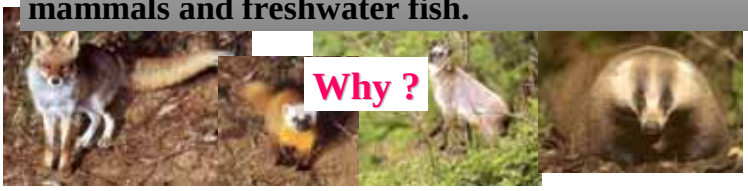
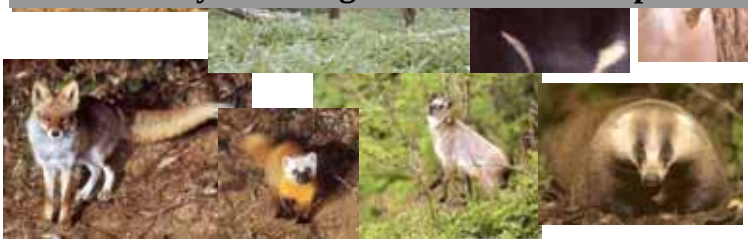


Why ?

紀伊半島の動物たち

It has been widely assumed that human-nature relations in the pre-modern Japan was governed by **"traditional wisdom"** that prevented people from exhausting biological resources,

or even that it was **the moderate human activity** itself that preserve the abundant biota and sustainability of biological resources in Japan.



紀伊半島の動物たち

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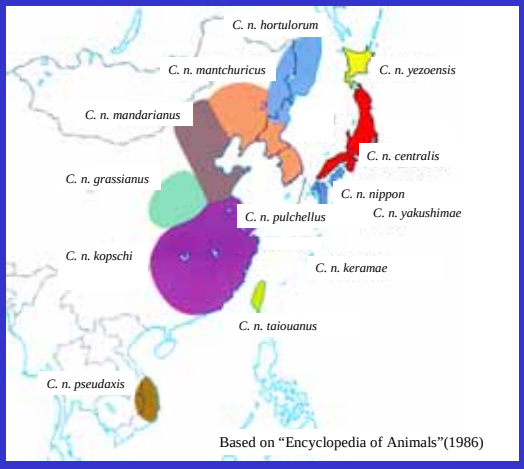
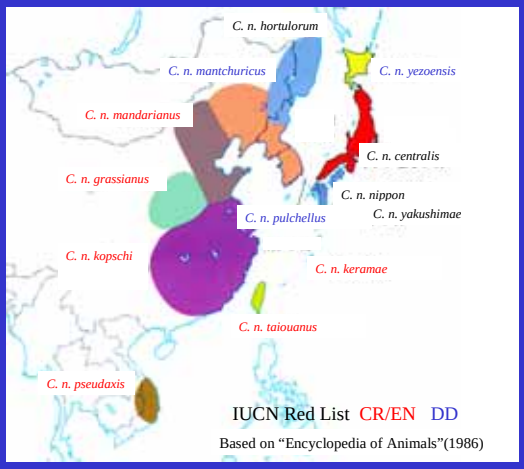
Is this true?

Subspecies of *Cervus nippon*



Based on “Encyclopedia of Animals”(1986)

Subspecies of *Cervus nippon*



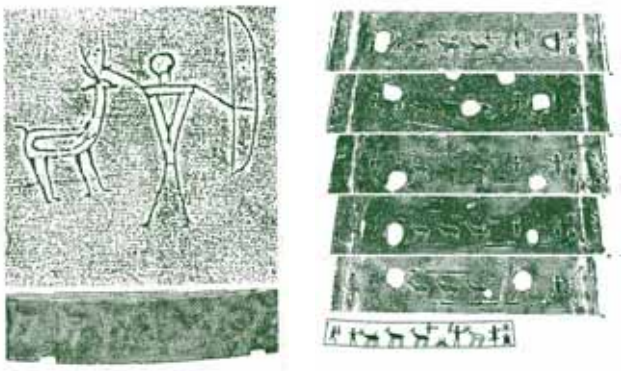
IUCN Red List CR/EN DD

Based on “Encyclopedia of Animals”(1986)

Deer designed in *dotaku*

Ceremonical Bronze Bell

(ca. 2000 bp)



Damaged on crops caused by deer browsing

Fence against deer and wild boars

吉野林業全書

Handbook on Forestry in Yoshino (1898)

シラネアオイ　日光

1980　　1994

Disappeared endemic plants (*Gaucidium palmatum*) in Nikko　Photo by K. Kuwabara

トウヒ林　大台ヶ原

1963　　1996

Changes of spruce forest at Mt. Ohdai-ga-hara

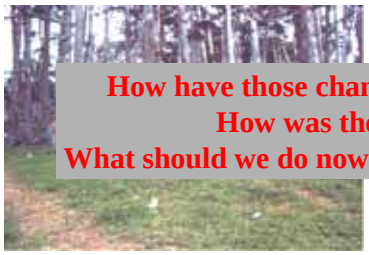
Photo by Prof. T. Sugawara

Explosion of deer population?

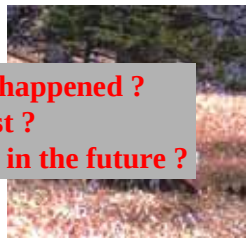
20-30 heads／km²
in several national parks

Explosion of deer population?

20-30 heads／km²
in several national parks



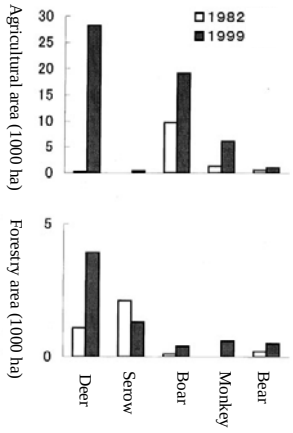
How have those changes happened ?
How was the past ?
What should we do now and in the future ?

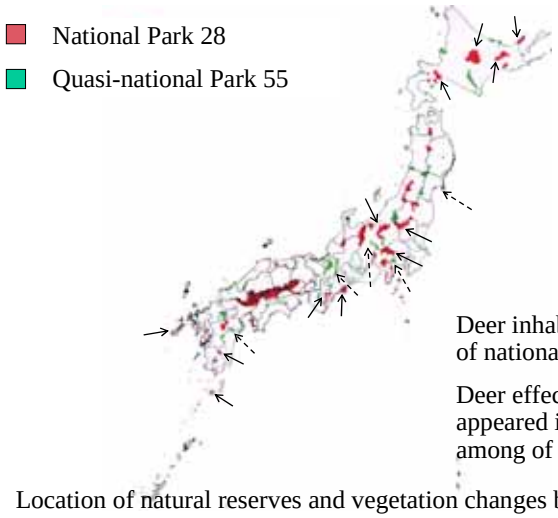


Distribution of *Cervus nippon* in Japan (1978)

Distribution of *Cervus nippon* in Japan (2002)

Increase of economical damages





Deer inhabits 2/3 of national parks.

Deer effects appeared in 2/3 among of them.

Location of natural reserves and vegetation changes by deer

Data from Dr. K.Tokita

Forests affected by deer

Dead bamboo (September 2001)

No understory vegetation (September 2001)

Photo by
Dr. G. Yokota

Bark strip
(October 2002)

No seedlings nor saplings (November 2002)

Poisonous and unpalatable plants prevail.

Poisonous plant
Veratrum album
(04/07/17)

Unpalatable plant
Skimmia japonica
(04/07/23)

Photo by Dr. G. Yokota

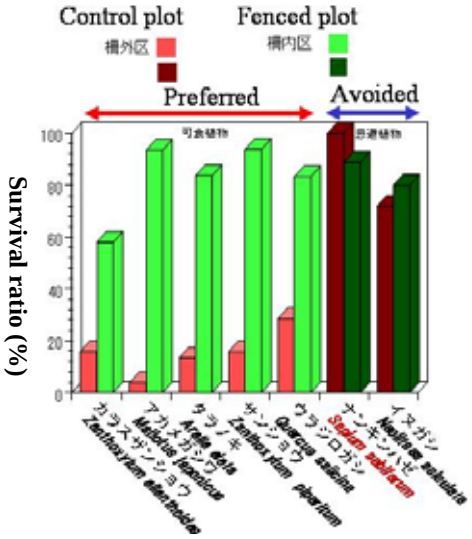
日の島　五島列島

Browsing line made by deer

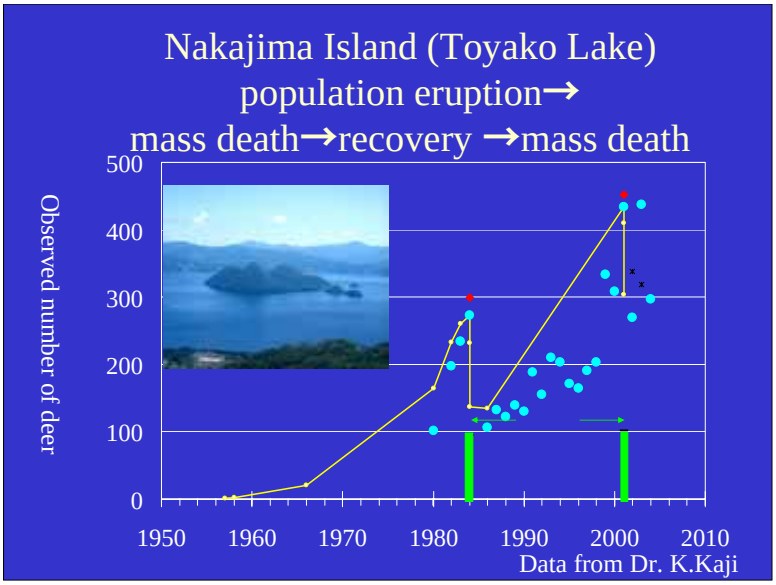
Soil erosion after disappearance
of understory vegetation

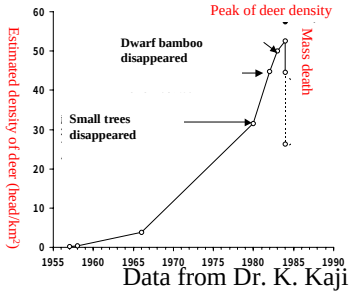
Hi-no-shima (Goto Islands)

Photo by Dr. K. Tokita



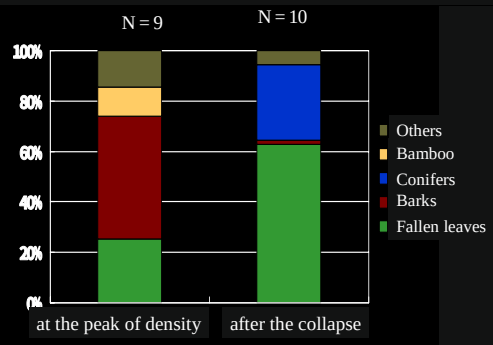
From Shimoda (1995)





Stomach contents of deer : at the peak of density and after the collapse of deer population

based on Takahashi & Kaji 2002



What happened in the seriously affected forests by deer browsing?

1) Seedlings, saplings and herbs which are palatable to deer disappear.

2) Barks of large trees are stripped and eventually trees die.

3) Herbs and shrubs which are even unpalatable to deer disappear.

4) Uncovered land suffers from soil erosion and finally land slide occurs on the steep slopes.

What happened in the seriously affected forests by deer browsing?

1) Seedlings, saplings and herbs which are palatable to deer disappear.

WHY IT HAS NOT HAPPEN IN THE PAST?

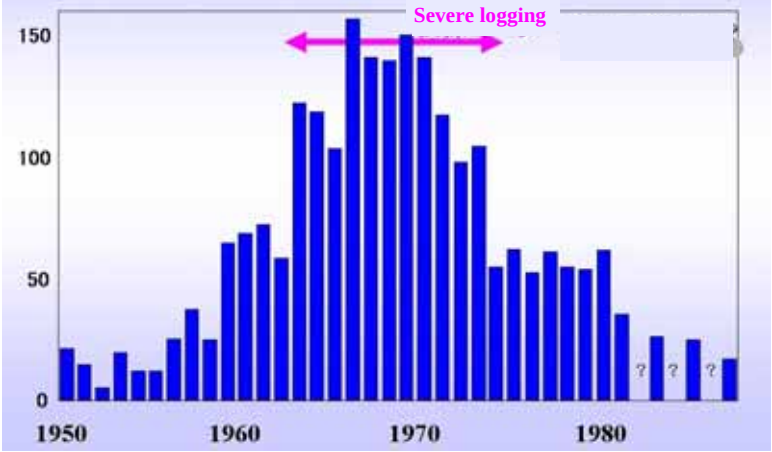
2) E

3) Herbs and shrubs which are even unpalatable to deer disappear.

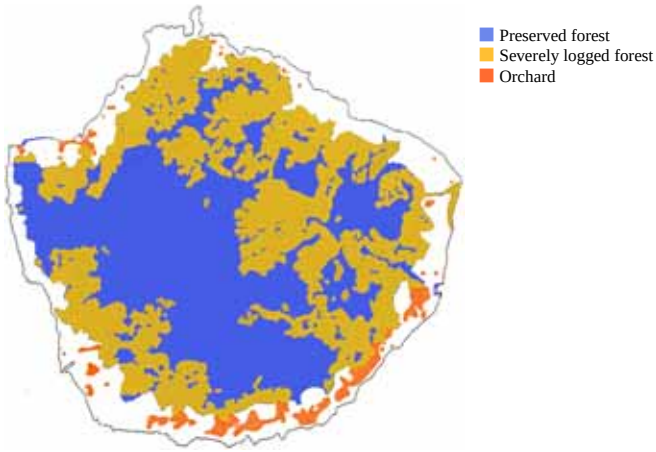
4) Uncovered land suffers from soil erosion and finally from land slide on the steep slopes.

World Heritage: Yakushima Island

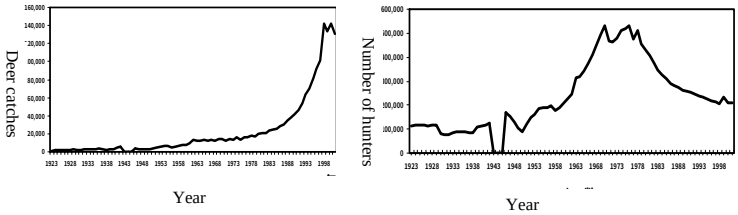
Volume of logged hardwood (x 1000 m ^{3})

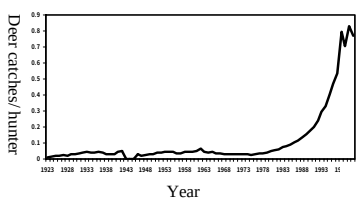


National Forest in Yakushima Island



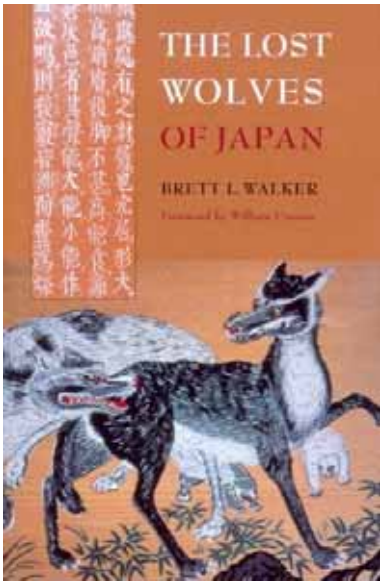
Deer catches and number of hunters





阿蘇下野狩図 (15**世紀**)

Hunting Scenery in the Aso Field
(15th Century)



Wolves as guardians of the farm land

Talisman of wolves

Canis lupus hattai
extinct in 1905

Photo by Field Science Center for Northern Biosphere, Hokkaido University

Canis hodophilax
extinct in 1896?

Photo by National Science Museum

Why did wolves disappear?

Photo by Field Science Center for Northern Biosphere, Hokkaido University

Photo by National Science Museum

Why did wolves disappear?

1) Starving:low density of deer and boars

Photo by National Science Museum

Why did wolves disappear?

1) Starving:low density of deer and boars

2) Disease:distemper, hydrophobia etc. introduced with western dogs

Photo by National Science Museum

Why did wolves disappear?

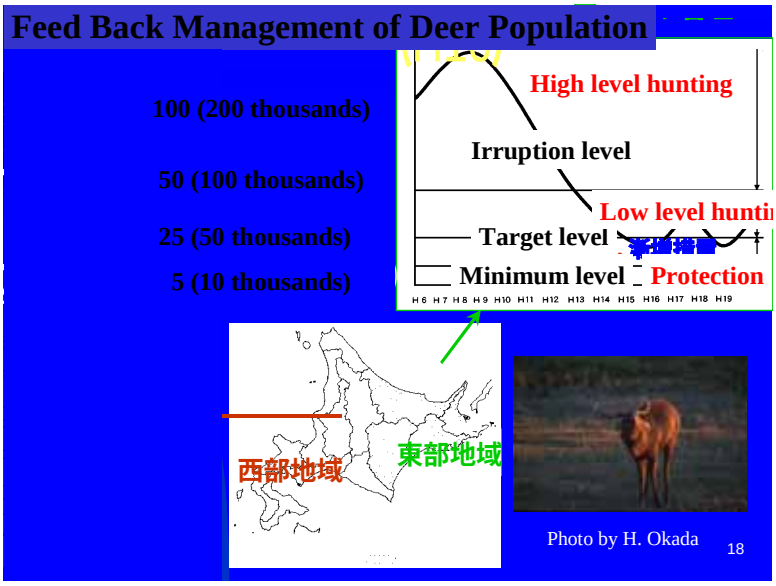
1) Starving:low density of deer and boars

2) Disease:distemper, hydrophobia etc. introduced with western dogs

3) Extermination: hunting, trapping, poisoning

Human being should take place of roles of wolves?

Photo by National Science Museum



Acknowledgements (alphabetic order)
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Dr. Shiro Tatsuzawa
Dr. KunihikoTokita
Dr. Gakuto Yokota

橋本雅邦 「乳狼吼月」(1898)
Gaho Hashimoto
Mother wolf barks toward the moon

Hannes Palang et al
Institute of Ecology, Tallinn University, Tallinn, Estonia
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Layered landscapes

Denis Cosgrove in his *The Iconography of Landscape* has argued that each socio-economic formation creates its own landscape with its own symbols, value systems. The changing formations should bring along changes in functions, meanings, and understandings of the landscape. Culture inscribes itself on the landscape as the sum of erasures, accretions, anomalies and redundancies over time. However, never all the elements are removed; the landscape we have today has remnants of several former periods. This dialectics is caused by the different strategies that the different power levels presumably practice in the landscape – as the primary settlement units and their affiliations have conservative property and power relations, they also behave in the landscape in a conservative way. At the same time, rapid changes in the top level of power could bring along drastic reorganizations in the organization of cultural landscape.

In recent research we have departed from Cosgrove's old ideas about each socio-economic formation creating its own landscape. We have shown how this multilayered landscape system is formed and changed; how different readings of this landscape emerge; how one layer is being replaced by another, and which has been the role of power play and circulating reference of imagery-"reality" in this change.

In this paper we would take a step further and try to find out how big has been the power of this change. I will focus on a (hi)story of one farmstead in marginal Estonia, showing its reactions to different powers and changes. What are the traces different power structures leave on the landscape? How are changes in meanings and understanding translated into patterns? How does a place react to power changes? How deeply has the power change been recorded in the environment? Is the place still there?

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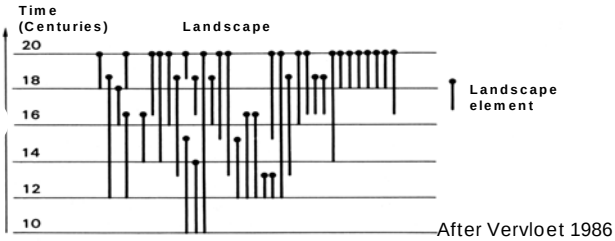
Layered Landscapes

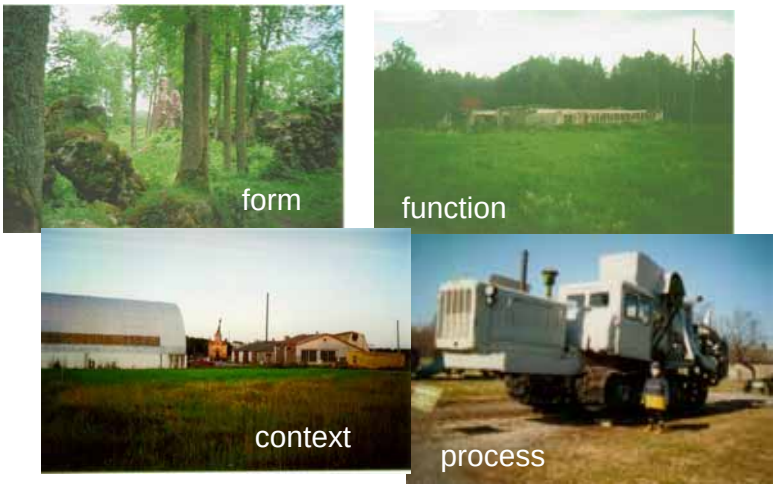
- “The cultural landscape is fashioned out of a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result. Under the influence of a given culture, itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development” C.O. Sauer 1925
- Each socio-economic formation creates its own landscapes. D. Cosgrove 1984

LANDSCAPE PALIMPSEST



After Vervloet 1986

Different time layers shine through in the same spot



How to approach landscape

- landscape as a way of using (resource: land-use, production, capital, etc.)
- landscape as a way of communicating (institution: customary law, social order, etc.)
- landscape as a way of seeing (scenery: representation, etc.)

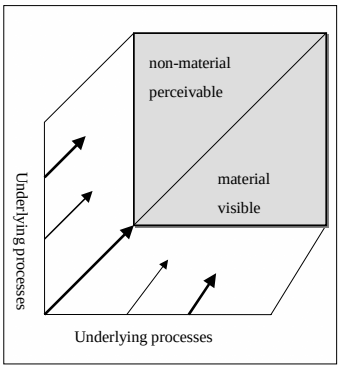
Widgren 2004

LANDSCAPE INTERFACES

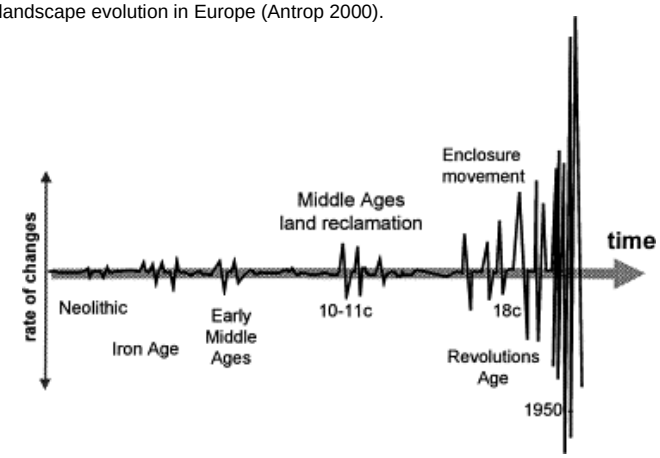
TIME	⟷	SPACE
CULTURE A	⟷	CULTURE B
PAST	⟷	FUTURE
HUMAN	⟷	NATURAL/MATERIAL
HUMANITIES	⟷	NATURAL SCIENCE
EXPERT	⟷	LAY PERSON
LARGE SCALE	⟷	SMALL SCALE
PRESERVATION	⟷	USE

Model landscape

- Three layers in the landscape: material/visible, non-material/perceivable, underlying processes.
- Landscape is a whole



Conceptual graph of the frequency and magnitude of landscape evolution in Europe (Antrop 2000).



LANDSCAPES IN TIME

Stages in landscape history

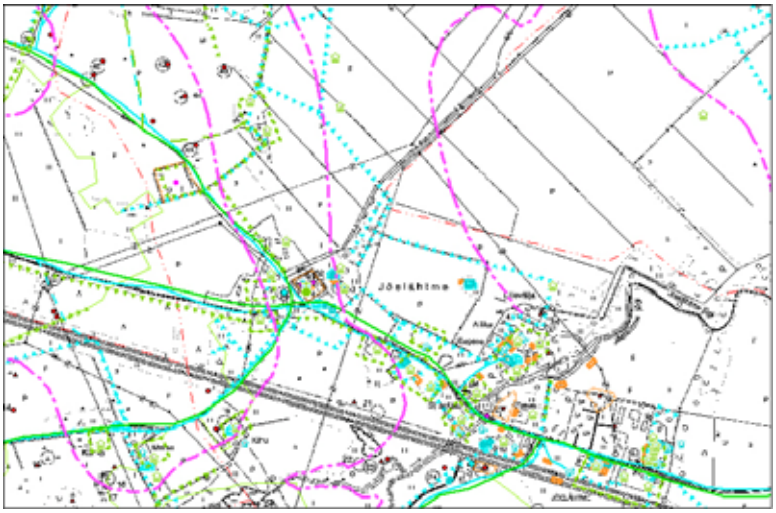
Western Europe	time	Estonia
Postmodern landscapes	2000	Postmodern landscapes
		Collective open fields
	1900	Private farm landscapes
Industrial landscapes		
	1800	
		Estate landscapes
	1700	
Traditional agricultural landscapes	1600	
	1500	
	1400	
Mediaeval landscapes		
	1200	
Antique landscapes		Ancient landscapes
Natural/prehistoric landscapes		

Vos and Meekes 1999 Palang and Mander 2000

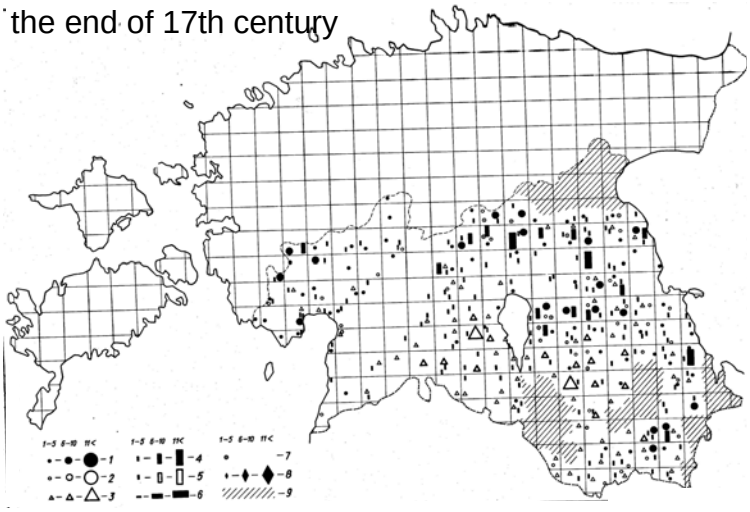
How it changes

- Political change
- Representation by power
- Changes carried out “in reality”
- People get used, still remember the past
- Time lags
- Innovation becomes heritage

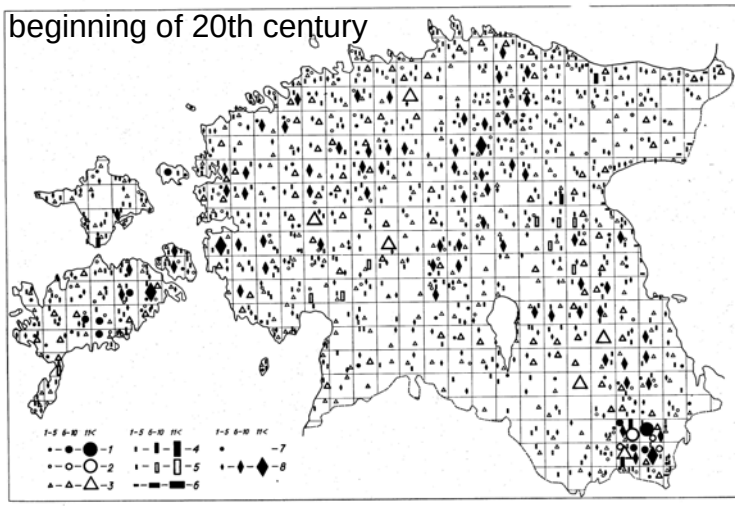
So what remains on the blackboard when it is cleaned?



Distribution of village types in South-Estonia in the end of 17th century



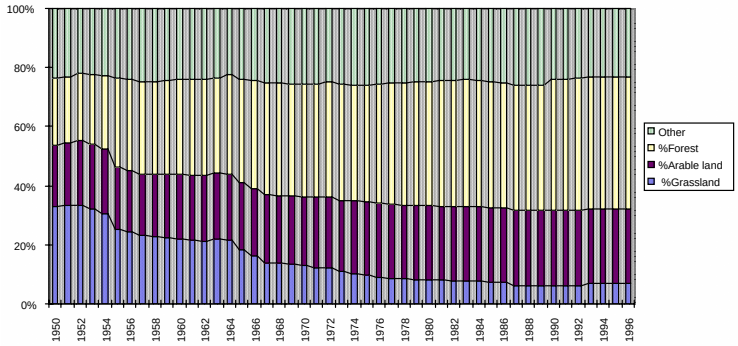
Distribution of village types in Estonia beginning of 20th century



Changing roles of villages

- Before land consolidation village had:
  1. Social organisation
  2. Commonly managed lands and strip-fields
  3. Households
- After land consolidation village became an administrative unit
- Many dispersed villages were named dispersed farmsteads, although their position was unchanged

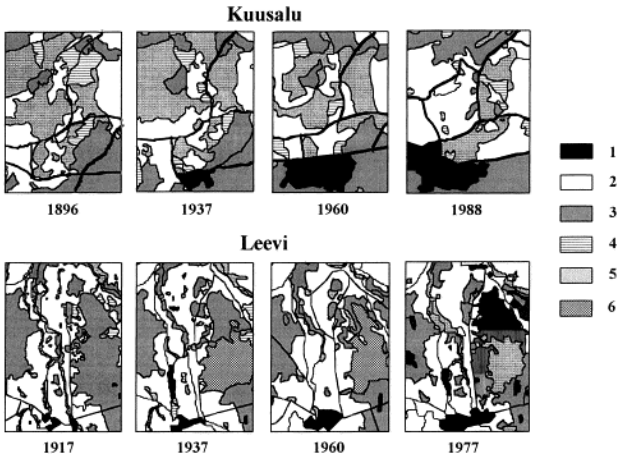
Land use change 1950-1996



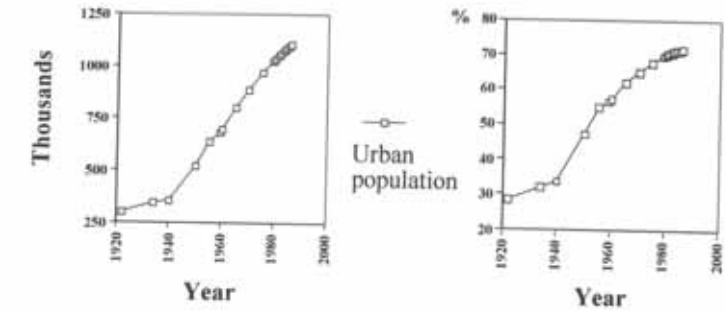
Dynamics of the share of agricultural land on Saaremaa

1918	*1929*	*1939*	*1942*	*1945*	*1966*	*1975*	*1986*	*1992*	*1996*	*2001*
88.05	*69.22*	*69.6*	*73.16*	*70.69*	*37.5*	*32.7*	*30.5*	*30.53*	*28.05*	*17.03*

Changes in landscape structure



Urbanisation

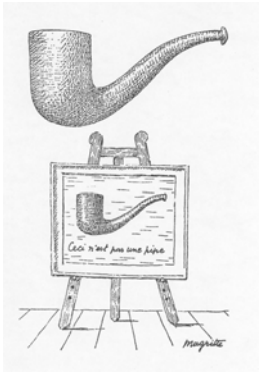


Visible layers

Landscapes and counterlandscapes?

Foucault (1977: 160), in discussing the way that political agents attempt to influence others, proposes that individuals are engaged in preparing 'counter-memories'; 'a use of history that severs its connection to memory, its metaphysical and anthropological model, and constructs a counter-memory - a transformation of history into a totally different form of time'.

Traditional images



"*landscape is no more one unity, but a multiplicity of meanings, readings and misunderstandings that are open to many interpretations*" (Jauhiainen 2003)

SETU

Traditional landscape or...

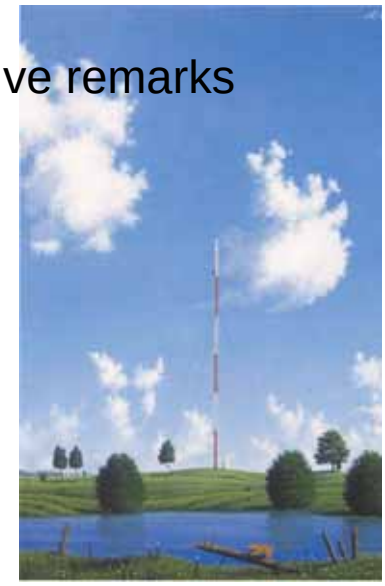
... touristic landscape?

Where is the traditional landscape then?

- Village structures have changed
- Land use has changed
- Context has changed
- Power structures have remained
- The idea of rural landscape has changed
- The controversy between insiders' ideas and outsiders' wishes

Some conclusive remarks

- Landscapes have time limits.
- Landscapes should be understood in the correct historical context
- There are counter-landscapes



Navitrolla, *Your call has been redirected, please hold*, 2003

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Landscape in ecological history: why are trees left in the rice field?

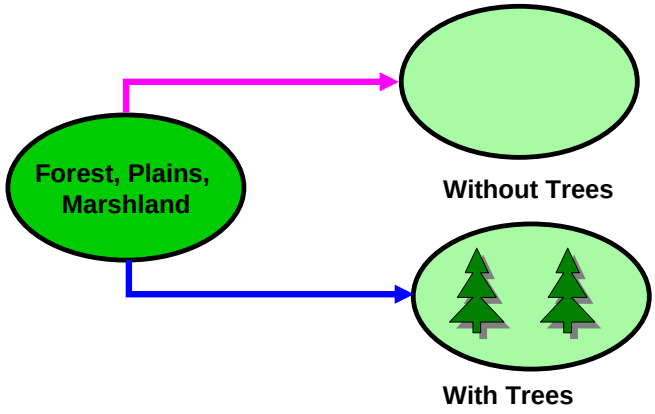
This paper explores a question of how we can interpret the landscape, using examples of rice field cultivators in Asia in differentiated ecological zones and with distinct cultural regimes (Japan, southwestern China, Thailand, and Lao PDR). The target of the analysis is directed to the existence/non-existence and its meaning of trees left in the rice field. The reasons why trees are left or cleared in the rice field are explained diversely by farmers who engage in paddy and upland rice cultivation in Asia. Practical benefits for shading humans, livestock and even fish in the paddy field, and for providing materials for firewood and manure are commonly found discourse. Ritual significance of particular species of big trees to be left *in situ* is another local interpretation. Despite this cultural interpretation of trees in the rice field, visible landscape does not clarify invisible aspects of the reason why trees are left behind in the past long time-span. Although rice cultivation is annually based, growth and preservation of trees conveys much longer biological and human-interacted processes, ranging sometimes over hundreds of years beyond the harvest cycle and years of fallow periods. Rice fields without any stands need to be inquired if first farmers exhaustively cleared the forest. Finally, I will argue that eco-historical analysis of landscape may provide a key to understand people's perception and practices in a series of human-environmental interactions.

Paper presented in the Pre-Symposium
"Landscape" on the 19th October, 2005

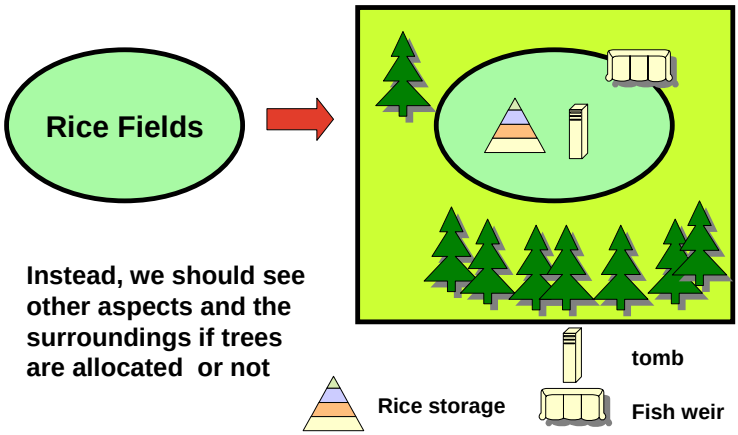
Landscape in Ecological History:
Why are trees left in the rice fields?

Tomoya AKIMICHI
(Research Institute for Humanity and Nature)

Landscapes in Rice Fields

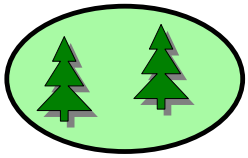


Rice Fields without Trees



Rice Fields with Trees

Local Interpretation

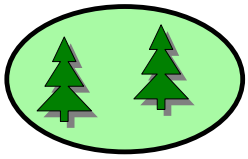


1. Utilitarian: Timber, housing, food, utensils, shade
2. Landmark, demarcation
3. Circulating: Manure for rice and fish
4. Symbolic: Sacred tree
5. Accidental or ecological succession

Local interpretation is often a sum of species-specific information, but in reality use of trees are multiple, and include the remnant and the newly transplanted species as well through the eco-historical processes.

Rice Fields with Trees

Eco-Historical Interpretation



1. Use of the remnant species
2. Transplanting new species
3. Preserving sacred species

Sustainable Use

1.Regenerating
2. Tolerance to seasonal fluctuation (inundation and drought)

Trees in the rice fields should be understood as consequences of human-environmental interactions through time, taking culture (subsistence complex, ethno-history and myth) and nature (ecology of tree species) into account.

Naxi's paddy field
Lijiang, Yunnan, China

Tai Lue's paddy and Rubber Grove, Munhai, Yunnan, China

Tai Lue's paddy and sugarcane,

Xishuangbanna, Yunnan, China

Hani's rice field, maize and tea garden,

Xishuangbanna, Yunnan, China

Pulang's village and rice field,

Xishuangbanna, Yunnan, China

Note that a tree was once used. (*left*)

Trees in the Paddy Fields, Southern Lao PDR.

Huts in the Rice Fields, Southern Lao PDR.

Temporary Residence and Rice Storage.

Note that the walls are made of tree leaves. (*right*)

Fish Aggregating Site in the Paddy

Rice Storage, Rice Nursery, and Lotus

Agricultural activities in Xekong River plains, Oy people, Xekong Province, Lao PDR.

Plough using water buffalo

Fig Trees in the Lotzekumo, Jinuo Mountain, Xishuangbanna,

Yunnan, China

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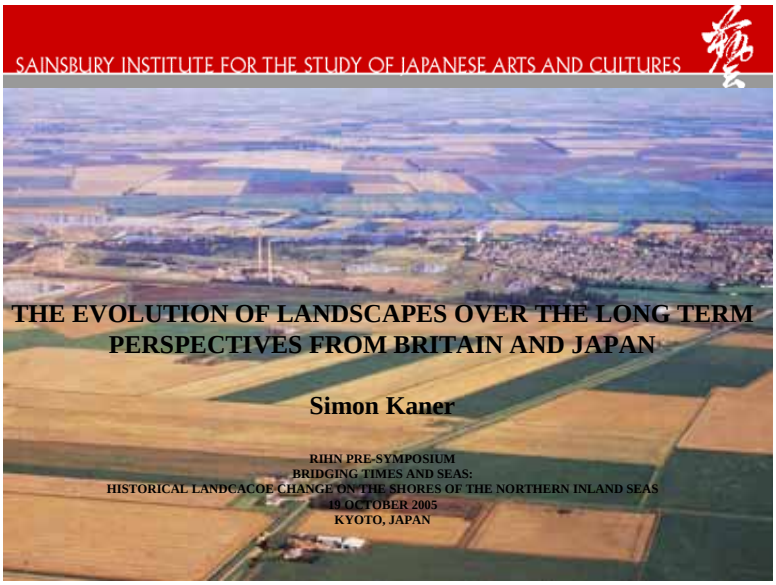
The evolution of landscapes over the long term: perspectives from Britain and Japan

Landscape archaeology has a long history in the UK, with landmark publications such as Cyril Fox's *The Personality of Britain* and W.G. Hodgkins' *The Making of the English Landscape*. Recent years have seen a large number of new works investigating particular landscapes from an archaeological perspective, often setting well-known archaeological monuments in their landscape (e.g. *The Stonehenge Environs Project*), and a new journal dedicated to landscapes (*Landscapes*). Landscape archaeology has seen a shift from interpretation based on two-dimensional distribution maps to the three-dimensional reconstruction of landscapes at different stages in their development, using a suite of sophisticated techniques including computer and satellite mapping. These new techniques allow archaeologists to ask new interpretive questions: beginning to address how early inhabitants of a landscape perceived and experienced the landscape of which they were part; how these perceptions and experiences affected the ways in which they operated within those landscapes; and what impact human beings had upon the landscape.

In the east of England, the landscape of the Fenlands and the River Great Ouse which water and drain them has seen some of the most innovative thinking on landscape archaeology. This presentation will investigate how some of these ideas can be adapted to complement work ongoing on the development of Japanese landscape archaeology. As a case study the landscapes along the longest drainage in the Japanese archipelago will be considered, that of the Chikuma and Shinano Rivers. The River Great Ouse flows into the Wash, in the North Sea, while the Shinano River has its mouth on the coast of the Sea of Japan. A comparison of the landscapes along the two rivers thus has the potential to contribute to an understanding of the Inland Seas project being undertaken by RIHN.



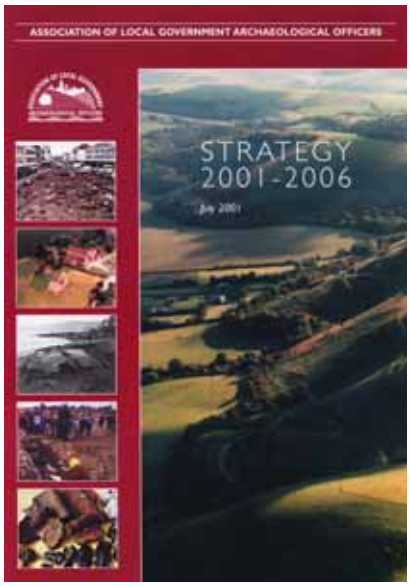
Historic environment

Historic landscape

Assessment

Preservation

Conservation

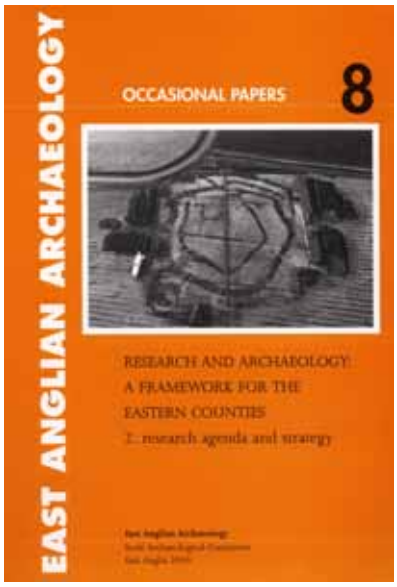


Regional Research Frameworks

Assessment of Existing knowledge

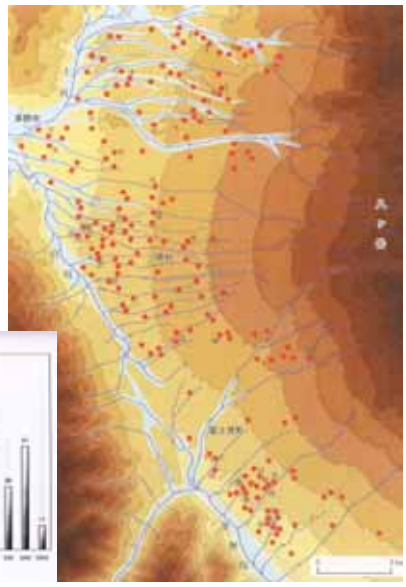
Developing a research strategy

Implementing a research agenda

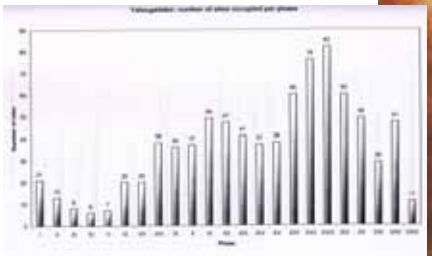


The Shinano and Chikuma River drainage

Longest river drainage in the Japanese archipelago



The Yatsugadake Middle Jomon landscape



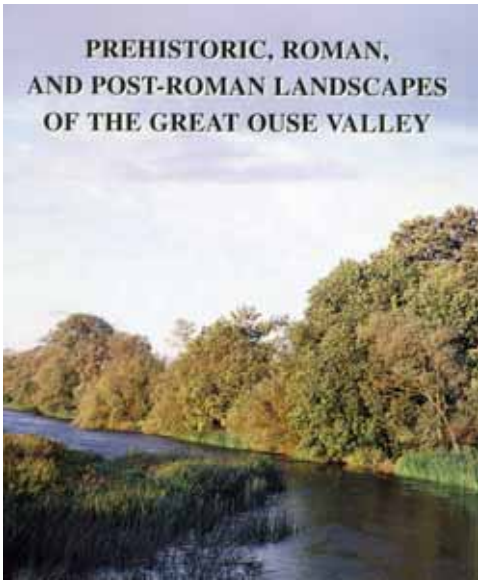
The Fens and
Drainage of the
River Great Ouse

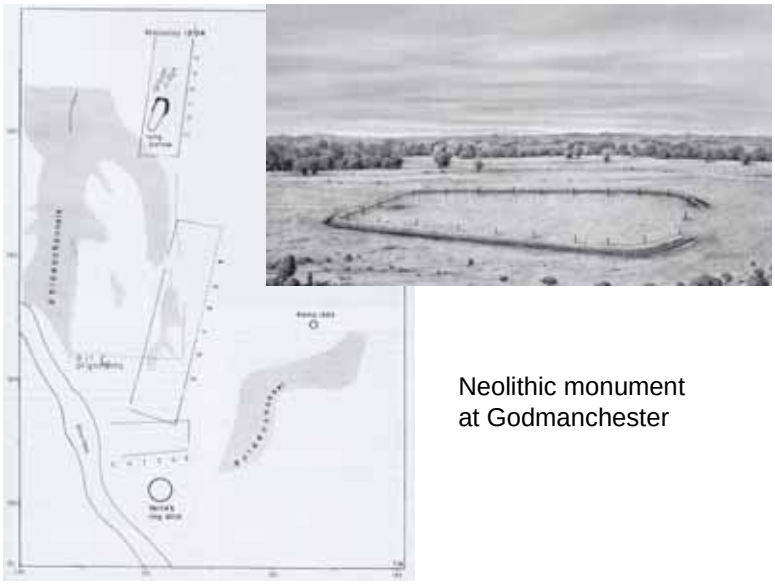
Alluviated landscapes

River systems
as landscapes

Boundaries

Communication
routes

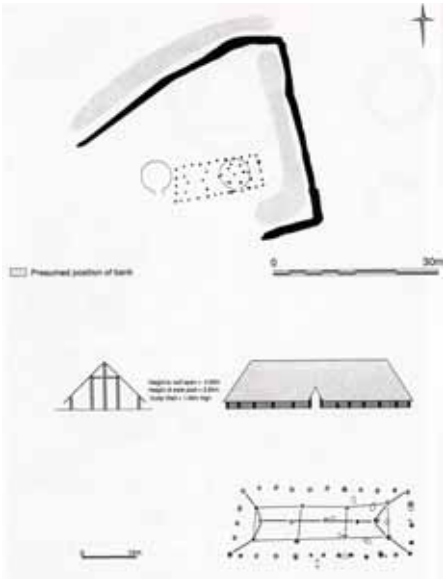




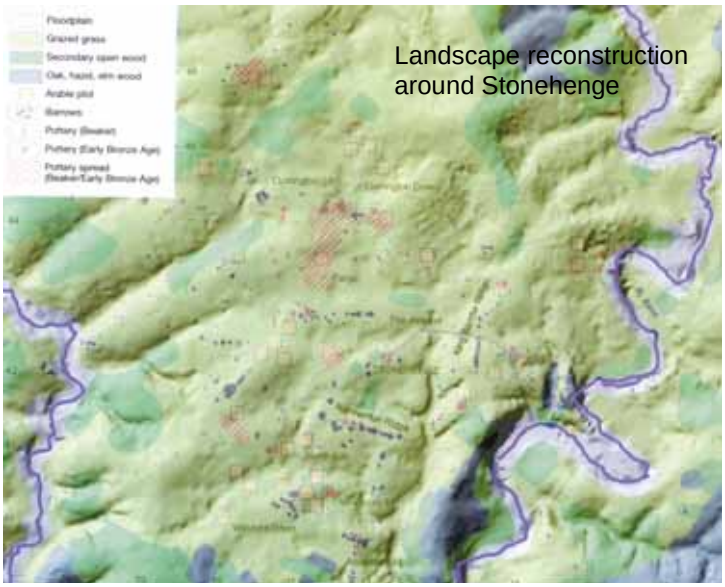
Neolithic monument
at Godmanchester

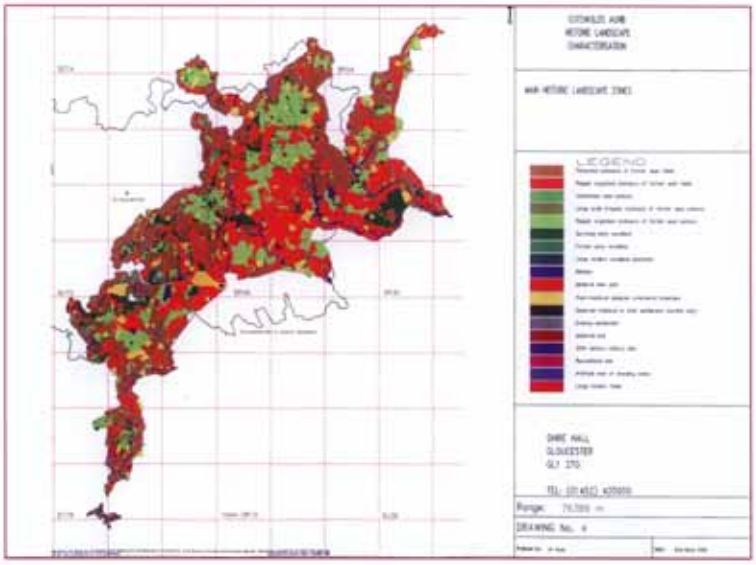
Needingworth
Quarry and the
Over barrowfield

Monitoring the impact of
quarrying on waterlogged
deposits



The Barleycroft Farm Bronze Age longhouse





View of the Forum at Rome by Utagawa Toyoharu 1770-1790

Some preliminary conclusions

Towards a comparative method in landscape studies

Need for clear, structured research frameworks

High potential of river systems for long term landscape reconstruction and interpretation

With thanks to:

The Research Institute for Humanities and Nature
especially Junzo Uchiyama

The British Academy

The Sainsbury Institute
for the Study of Japanese Arts and Cultures

The Shinano River Project

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Why did shell-middens disappear?: culture roles in the landscape shift in prehistoric foraging societies

Shell-middens are prehistoric sites accompanying large-scale accumulations of shellfish, characterizing the wide-range exploitation of aquatic resources and constituting major factors of landscapes in the Holocenic foraging societies on the shores of the both "Northern inland seas". Although some shell-middens still existed after agrarian ages started, most of them disappeared in both areas. Two-thirds of middens in the eastern Eurasian coastline area are concentrated on the Japanese archipelago and date back to the Jomon period (ca.12, 000 – 3, 000 BP); however, most shell-middens were abandoned until the former half of the Jomon Final Phase (3, 500 – 3,000 BP) and no new ones has been found after Jomon.

Although many theories have been presented either from environmental or economic perspectives, such as climatic deterioration, over-exploitation, and introducing new technology, these have failed to explain the full scenario of this phenomenon. Estimating each existent hypothesis, this paper reconsiders the reason for the overall disappearance of shell-middens from socio-cultural points of view and mentions some new prospects for future research in landscape shift in the transitional age between foraging and agrarian societies, by mainly using the Jomon examples.

Why did shell-middens disappear? - culture roles in the landscape shift in prehistoric foraging societies

19Oct, 2005

Junzo UCHIAYAMA

RIHN, Japan

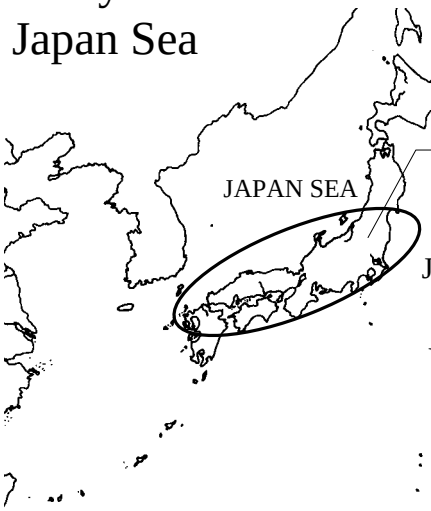
Shell-middens in prehistoric landscapes

: concentration area of shell-midden sites

Shell-midden site:

1) Large mound of discarded shellfish remains by the post-glacial foragers
2) Product as a result of long-term concentrating disposal at one place

Study Area – Southern Coast of Japan Sea

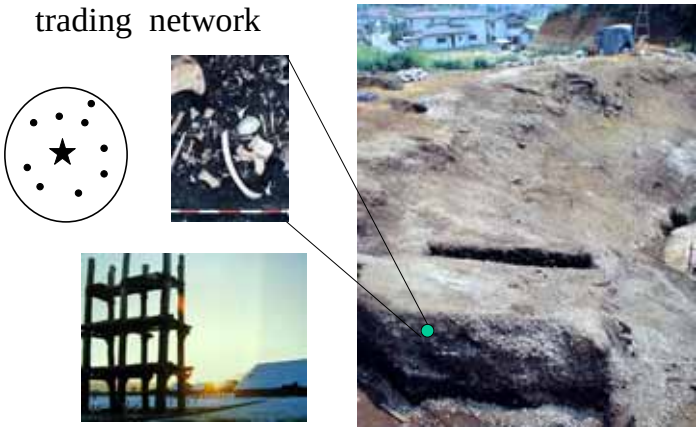


JOMON(12,000-3,000BP)--
Foraging-main, pottery

YAYOI(3,000-1,600BP)--
Rice cultivation-main,
bronze&iron

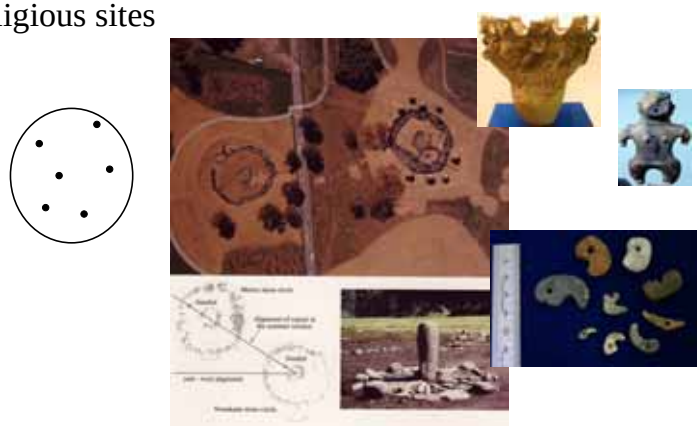
Jomon-Yayoi Settlement Pattern1

- Clumped pattern: big scale settlements & trading network



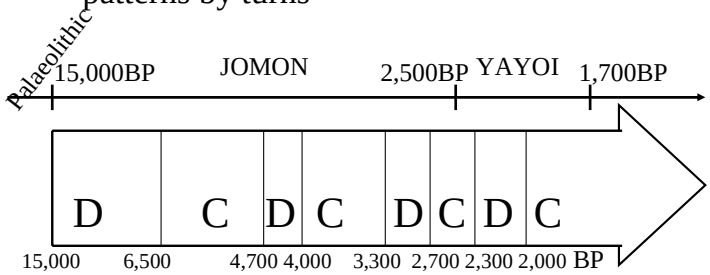
Jomon-Yayoi Settlement Pattern2

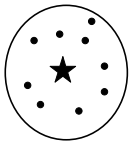
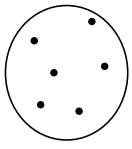
•Dispersed pattern: small scale settlements & big scale religious sites



Jomon-Yayoi Settlement Pattern3

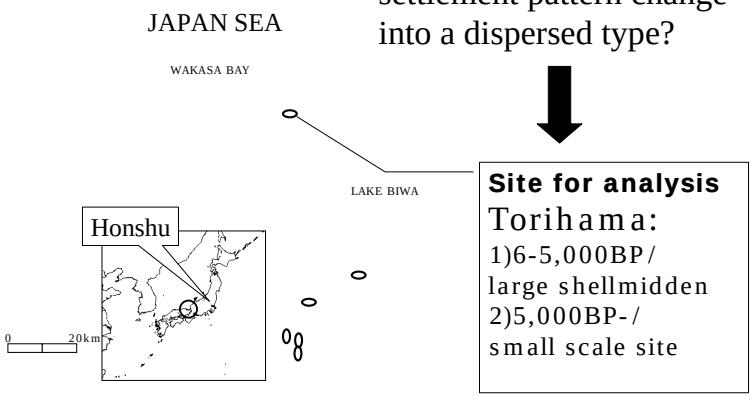
- Repetition of clumped and dispersed patterns by turns



C: Clumped  ; D: Dispersed 

Question

•Why did the 'clumped' settlement pattern change into a dispersed type?



Site for analysis

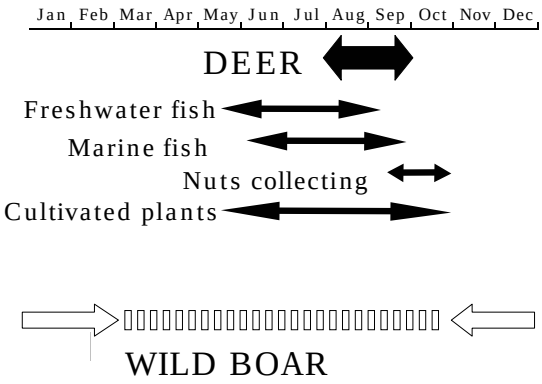
Torihama:

1)6-5,000BP/ large shellmidden

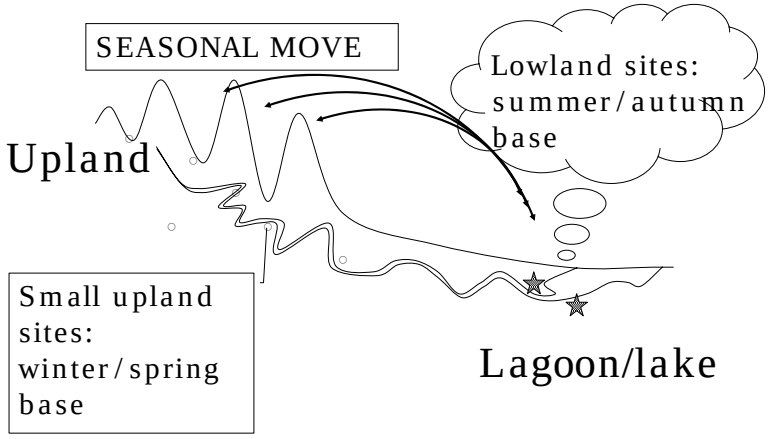
2)5,000BP-/ small scale site

Aerial View of Torihama

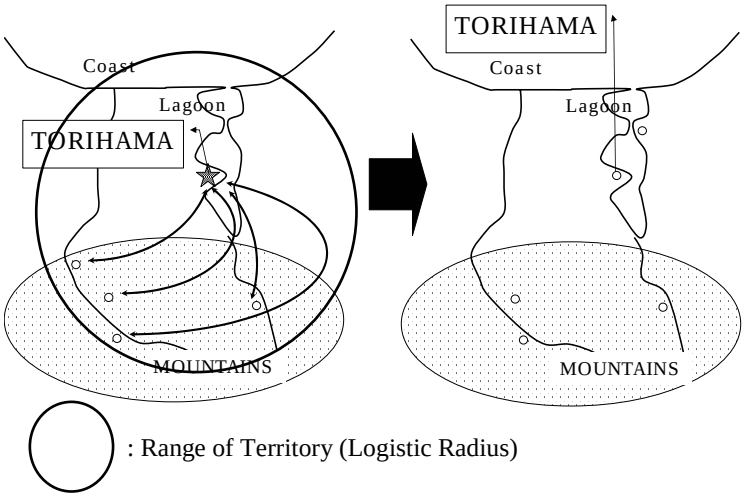
Seasonality at Torihama



Spatial Use in the Torihama Clumped Age: 6-5,000BP



So… What Happened Afterwards?



Assumptions on the Cause of the Land Use Change

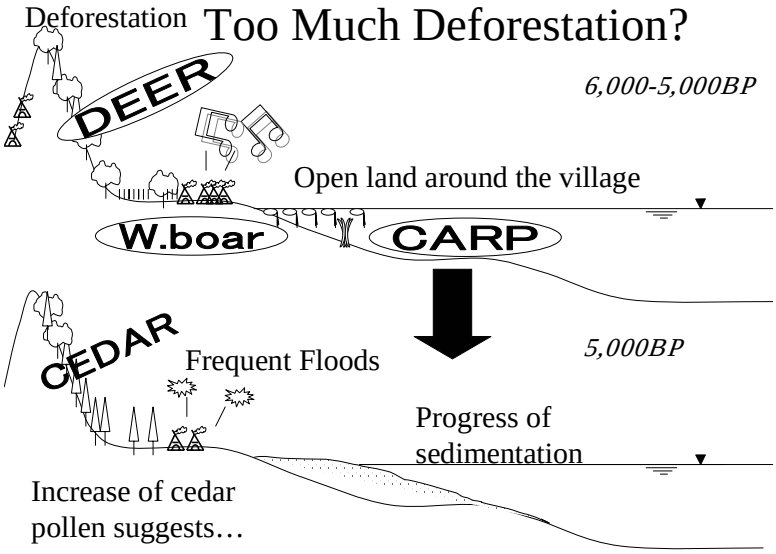
(1) Environmental deterioration?
→ No serious change

(2) Population pressure?
→ No such signs

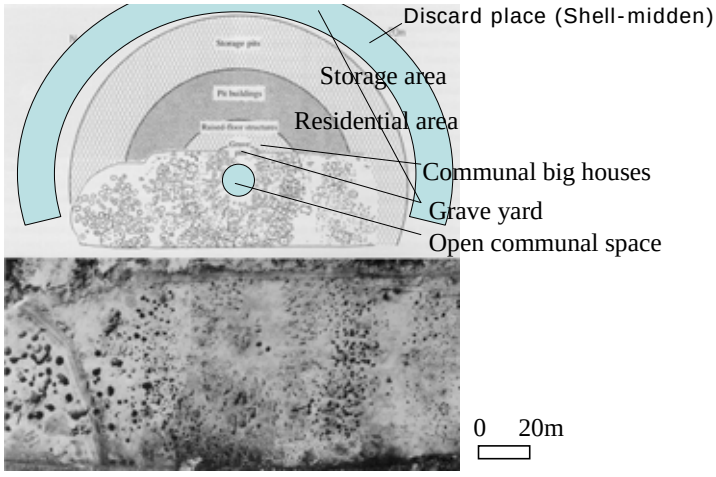
(3) 'Invasion' by other social groups?
→ No such an evidence

(4) Failure in environmental manipulation?
→ !

Too Much Deforestation?



Even so… Is the failure of environmental-control theory enough? -- structures of big shell-midden complex



What was a 'shell-midden', after all?

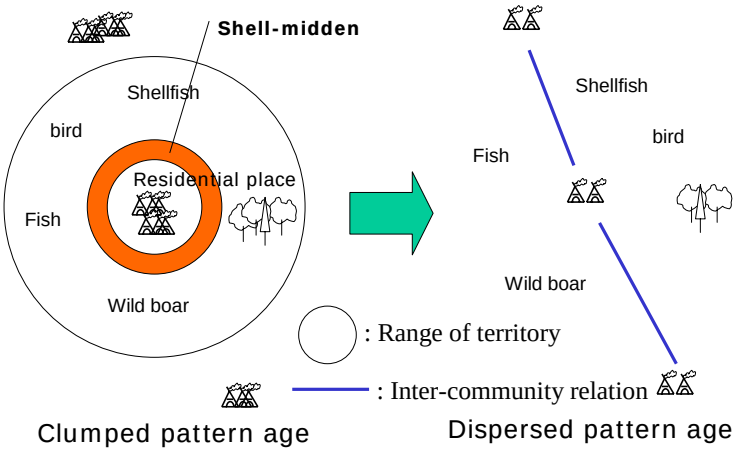
- Its existence itself shows
  1) Different way of disposal of consumed resources
  2) Different world view
- It reminds us the world view of the Ainu:
  For the Ainu, all the acquired stuffs are the gifts from the deities; so the wastes should be sent back to the spiritual world in a proper way, as so done even in case of human bodies.


Ainu bear festival


Human burials in shell-layers


Ariyoshi-kita site, Chiba

Conclusion


Shell-midden
Shellfish
bird
Residential place
Fish
Wild boar
Shellfish
bird
Fish
Wild boar
: Range of territory
: Inter-community relation
Clumped pattern age
Dispersed pattern age

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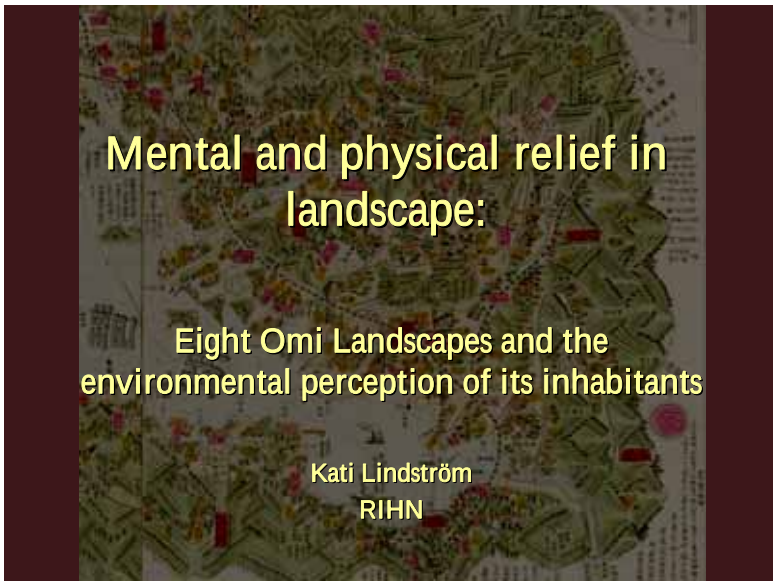
Mental and physical relief in landscape: Eight Omi Landscapes and the environmental perception of its present inhabitants

Several studies in landscape have shown that human beings tend to invest similar meanings to similar natural phenomena, quite regardless of their concrete cultural environment. Thus, Simon Schama in his *Landscape and Memory* has demonstrated the human fascination with trees/forests, rocks and rivers throughout the Western civilisation. Research in landscape perception has revealed a clear preference of humans towards some kinds of sceneries (open landscape, waterscapes etc), whereas other types of landscapes are not appreciated at all. In the same vain, different power formations and different cultures – in some instances (like in the case of Australia) even different civilisations – inhabiting one certain landscape at different instances of time, tend to attach symbolic meanings and functions to the same locations or landscape features regardless their differences in world view. This is a source of a major legal and moral issue in Australia, where the holy loci of aboriginals coincide with the main "holy sites" of the colonial power. In Estonia, every consecutive power regime has poured new contents into the same sites, building thus layers of meaning onto the landscape. When mapping these important (auspicious etc) sites on a landscape, we would most probably discover certain semiotic vectors on the map, indicating the concentration of semiotic processes on some sites and the lack of time-persistent semiotic value on others. I would like to call these vectors *semiotic* or *mental* relief of the landscape as opposed to the purely physical relief, which on one hand makes the mental formations possible, but on the other hand is not a sole sufficient reason for the emergence of semiotic patterns on the landscape.

In this presentation I would like to compare the image of landscape in the classical Eight Omi Landscape canon and in the opinions of the present inhabitants of Shiga prefecture to see which locations or phenomena have maintained their importance through the jump from feudal Edo period to the modern world.



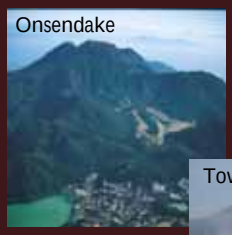
Three Great Views of Japan: Miyajima, Matsushima, Ama no hashidate

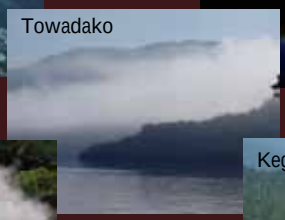
Thirty-six Views of Mt Fuji: Hokusai



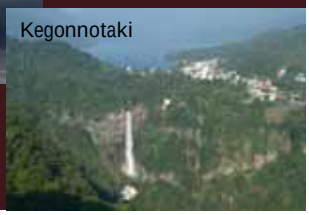

Thirty-six Views of Mt Fuji: Hiroshige

Eight Japanese Landscapes: 1927





+ Kisogawa
Karikatsu choge
Murotozaki



Eight Beauty Spots around Lake Biwa: 1949

Eight Beauty Spots around Lake Biwa: 1949

Eight Beauty Spots around Lake Biwa: 1949

Photos: Industrial Research Centre of Shiga Prefecture

Eight Xiao Xiang Landscapes in China

Song dynasty (960-1279)

Xiao Xiang landscapes in Japan

Souami, 1513

Eight Omi Landscapes

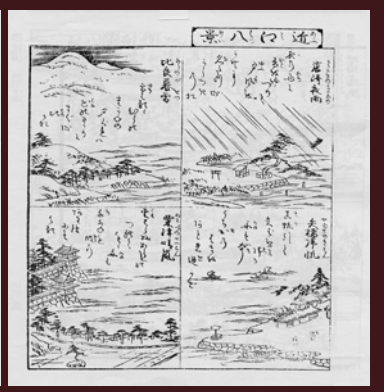
returning sails at Yabase, autumn moon at Ishiyamadera, sunset glow at Seta river,

clearing sky at Awazu, evening bell at Miidera, night rain at Karasaki, descending geese at Katata, evening snow at Hira

Eight Omi Landscapes, 19th century

Omi Eight Landscapes with poems

Omi Eight Landscapes in women's education: 1716



17th century travelogue:
Nihon bunkan ezu

Seta no Karahashi

瀬田夕照

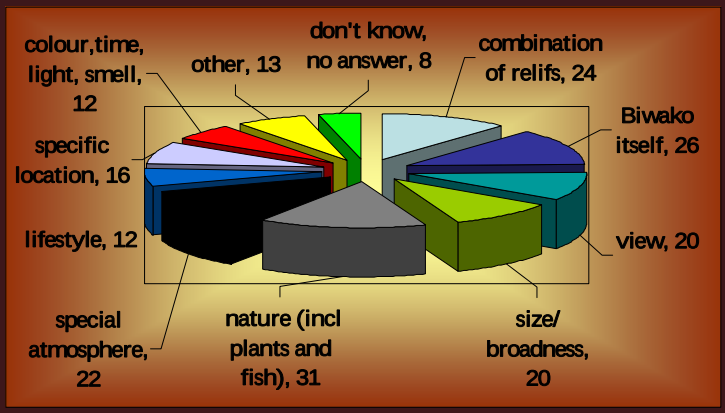
Environmental preferences

People prefer

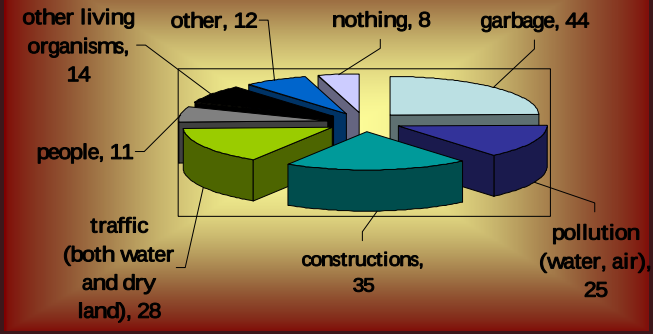
- Wide spaces, open views
- Diverse landscapes (in land form, usage etc)
- Landscapes with water
- Landscapes which bear the mark of human activities
- Landscapes with movement (water, roads etc)
- Landscapes with clear usage pattern
- Accessible places
- Well-maintained or well-preserved places
- Areas of traditional land use

(after Antrop, Coerterier, Palang et al)

What is special in the surroundings of Biwako?



What contaminates the landscape around Biwako?



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Landscape studies in Japanese archaeology

In this paper, we would like to introduce some landscape studies in the archaeology of Japanese prehistory.

Nakamura discusses landscape and monuments in the Jomon period (ca. 14000 - 900 BC). Jomon people consciously and deliberately incorporated the local topography and the movement of the celestial bodies into the layout of their cemeteries and monuments. At Nakanoya-matsubara stone grave markers were aligned towards the volcanic peak of Mount Asama, and two lines of tall wooden poles at Sannai-maruyama aligned with sunrise at the summer solstice and sunset at the winter solstice. Moreover, at Komakino different stone arrangements corresponded with different major landmarks. It is an interesting phenomenon that those expressions of local geography often coincided with changes in social conditions, such as the establishment new communities and the emergence of new social orders. At Nakanoya-matsubara, stone markers were set up with the at the time the village first developed. From the late Middle Jomon to the early Late Jomon period, when both the wooden post arrangements at Sannai-maruyama and the stone arrangements at Komakino were constructed, differentiation in funeral practice increased. Although there is at present no clear explanation for why Jomon people chose to express their ideas about the local landscape in this way at that particular time, designing their landscape on the basis of monuments and cemeteries may be related to social intentions, for example in order to enhance the feelings of unity between community members.

Kobayashi deals with the influence of ancient Chinese landscape on the arrangement of ritual features in the Yayoi period (ca. 900 BC- 250 AD). The beginning of the Yayoi saw start of a new life style in the Japanese archipelago, and some new technologies, such as paddy field rice cultivation and the production of bronze, was imported from the Korean peninsula and the Chinese mainland. Yayoi people also adopted continental rituals and ideologies. The Yoshinogari site, a major settlement in northern Kyushu, is a

good example of the zoning of space within settlement that utilised new ideas about landscape. At Yoshinogari, all the important monuments, such as mound burials, the ancestor temple, and the earthen platform, were aligned in a straight line from north to south, an arrangement which originated in ancient China. The appearance of linear alignments of monuments may imply the establishment of a new social order, and it may have given a new feeling of unity and identification with their society to the members of the local community.

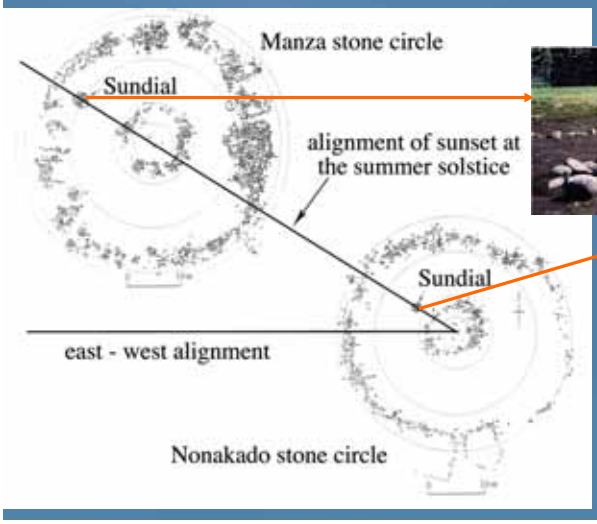
Landscape studies in Japanese Archaeology

Oki Nakamura (Kokugakuin University)
Seiji Kobayashi (Kokugakuin Tochigi Junior College)

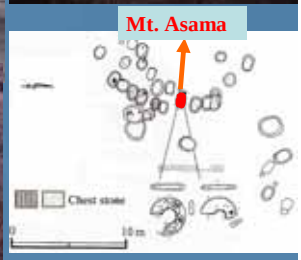
The Jomon culture (14000 - 900 BC)

Left:a reconstruction of village. Right: flaming pottery style and a lacquer comb

Oyu stone circles



Nakanoya Matsubara



Slit stone earings

Standing stone makers of D1011 are aligned on the volcanic peak of Mount Asama.

Sannai Maruyama

Six wooden posts formed a rectangle of two rows of three posts set

The base of six large chestnut posts, 1 meter in diameter and dating to the late of the Middle Jomon, approximately 3000 BC

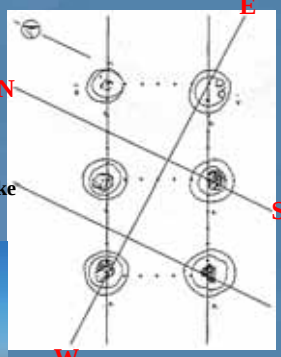
Wooden poles and landscape

Sunrise at the summer solstice

Mount Takamori

E

N



S

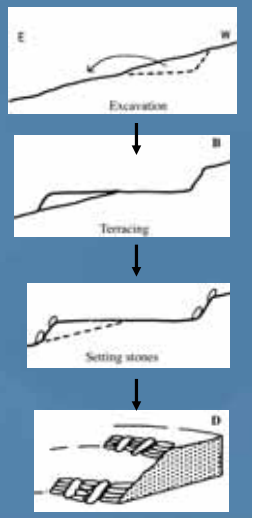
Mount Komagatake

W

Mount Iwaki

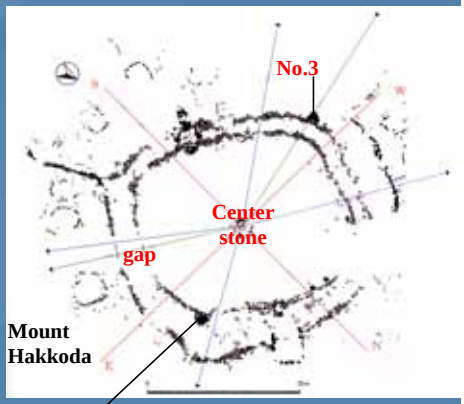
Sunset at the winter solstice →

Komakino

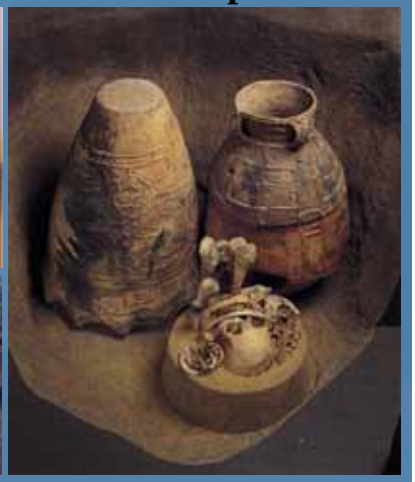


Stone arrangements and landscape

Mount Iwaki



The distinct differences in burial practices



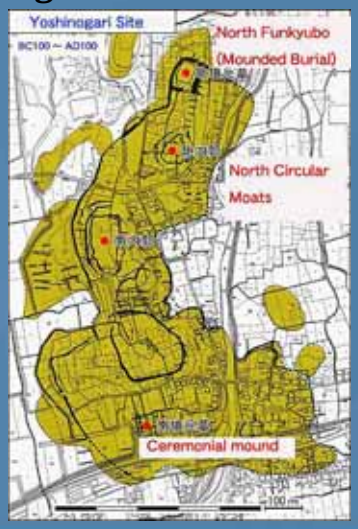
graves with stone arrangements

special pots for secondary burials

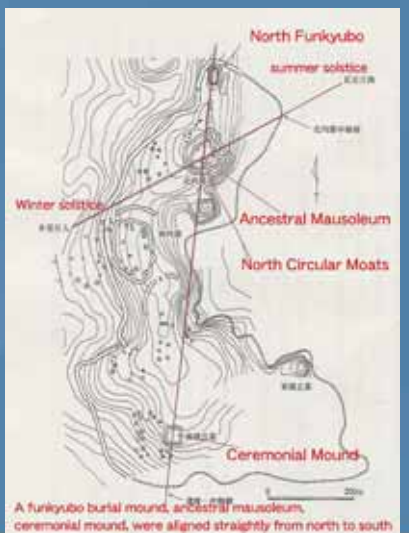
The Yayoi culture (900 BC-250 AD)

The appearance of paddy rice agriculture and moated settlements

The Yoshinogari site



Straight arrangement of ritual features



A funkyubo burial mound, ancestral mausoleum, ceremonial mound, were aligned straightly from north to south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Fin.