
Goddard Lela Cox -  \^ arboricel, \^ weeds but no exotic app. \^ Ambrosia + Tussilaga + composite

Bernabo 1997

Also see Thorbahn + Cox 1988 - \^ composit + Ambrosia

\^ trees \sim 1000 BP

But little evidence for As - clearance to \^ wildlife
Kelso Site

2 overlapping villages 2 acres each bounded by double
palisades - walls 4-6 feet apart
Some places - baffle poles posts
Moats - clay if filled w/ refuse, topsoil, wood
Walls - 15-20'

Many small oblong houses 16-24' E short ecl

Longhouse 12x 22' W
6 hearths 24 hearths in 3 houses; each for 2 families
n240 people

May have corral = large + small
Roasting pits

Presumably maize v. imp but few remains
27 deer 1 passenger pigeon

Guthrie site

assume food storage in houses & vestibules
1st pit in a row Van den Bogaert - up to 200 bu.
in one house

Most food storage probably above ground - in cabins
Heritage Nfld International Fishing 16th C

Between 1545 - 1565 8 field vessels
  Bordeaux  20 → 40
  La Rochelle 12 → 40
  Rouen 12 → 90
  Les Sables d'Olonne → 100

English 30 → 200 by 1600

1615 Richard Whithouw - 250 Eng Vessels - 5000 mRN

French - Dery - wet - salt or dry
  End - dry - cleaned, split, laid out

ENA - most emphasized cultural change: coastal NY & SWF - chronostatigraphic continuity - maintenance of familiar patterns of subsistence, settlement, raw material utilization, technology for thousands of years. Unlike inland - maintain long-crat tradition up to Euro arrival 12,500-10,000 BP 8-6; 6-2; 2-1; 1-1000 BC.

Change emphasized: big game - Paleo; broadscale economic - Archaic; marine as - W.

Profound transformation but broad, persistent patterns.

Favored WUS - v. little evidence on Paleo; cannot extrapolate - virtually no data or evidence on large mammal hunting; no mammal fossils w/ weapon.

No evidence of large mammal focus.

Paleo landscape may have been ecologically diverse - not impoverished.

As support: Paleo - hunt large, sm. game; wild plants + fish.

Conseq. shift to Archaic not so revolutionary.

Devel op of Ag + Pottery - not nec. linked. Last millennium - long-stay assumption engaged in cultivation corn Ag like people to NSW + this supported perm. settled villages. Primarily from Native Euro accult + comparison w/ Iroquois.

Doesn't appear in coastal data or even interior.

Tropical plant domestication - late; w/ lit. discernible impact on lfr. RV.

Remains - typically lacking or sparse; limited isotopic support. Continued long-established tradition of broad spectrum resource use. 
>20 spp plant; >100 spp vert, “dozen molluscs

variation but little A over time - differences relate to ecology.
sells not A

Corn added lab - did little to alter long-existing lifeways - simply

a new resource added to ever-expanding list of locally utilized foods

Archaic Polyn - diverse range of locally available R - basic polyn

No Woodland economic framework.

2,3000 BP - sedentary lifeway established. "villages", "merchant bases

or "permant bases" - positioned to provide near access
to food & industrial resources

Essentially no A in settlement or resource use & size models

Lithic inclusion - remarkable lack of variation over thousands

of years; reduction of locally chipped, locally transported cobble to bifaces

If remove minima of that types - no A

Hudson + CRY shift to moose after 1000

Settled life not only urban if Agroclim

Why do Ear acca cliff from arch?

Reject Iroquois mitpa - Alg

late Archaic Site

Middle - excellent bone preservation

Oak - hickory, chestnut + deer - turkey bones. Atlantic Coast to S NY to Michigan + Illinois

Pepin - high protein diet, good health. Rapid cooling after 4500 BP. Disappearance swordfish.

Ritchie MV - primarily hunting economy beginning to adjust to I/tem.

ME - imported materials - SE PA, SC, CT, ENO

"NA "peoples", and hunter-gatherers in particular, have historically been perceived as free, border - bound and culturally stodgy."
ISOTOPES AND DIET

The importance of marine hunting by Moorehead-phase people is clearly apparent in the sophisticated bone technology and in the abundance of marine faunal remains of Occupation 2. It is also evident in a newly developed technique for reconstructing diet from human bone chemistry.22 Bone is composed mainly of two fractions: apatite, a crystalline substance, and collagen, a protein. It has been demonstrated that bone collagen includes two isotopes of nitrogen, the common 15N and the less common 14N, in ratios that reflect diet, specifically the amount and type of protein consumed. The more meat there is in a person’s diet, the more enriched their skeleton will be in 15N. The degree of enrichment is greater if the meat is from a marine organism and if the organism was itself a marine-meat consumer, such as a seal or a large carnivorous fish, enrichment is greater still. The same kind of enrichment occurs with the carbon isotope 13C relative to the more common 12C, but to a lesser degree, making it less useful as a dietary indicator. Another problem with 13C enrichment is that it is proportional to both meat and corn (Zea mays) intake. Thus in cases where both marine organisms and corn may have been part of the diet, 13C enrichment cannot distinguish between the two.

The ovals in Figure 2-13 indicate the isotopic ranges (to the first standard deviation) of several coastal Maine populations, one from the Boucher (B) site in interior Vermont and one from Port au Choix (P) in northern Newfoundland. For purposes of comparison, these ranges are superimposed upon a series of fields defining the isotopic ranges of vertebrates, including humans, whose diets are known from nonarchaeological information. The isotopic ranges for all the Maine coastal populations indicate a high intake of marine protein (flesh) in their diets. The highest relative values of 15N are for individuals from the Moorehead-phase cemetery at the Nevin site in Blue Hill (N) and are most likely due to the importance of swordfish and cod in their diets, while the lowest values are for the Susquehanna-tradition cemetery (T) at the Turner Farm site.23

Calloway, C. 1990. *The Western Abenaki of Vermont, 1600-1800*

Social org - fluid, flexible, accommodated separation and integration; fluid ethnic + territorial boundaries, merging + friction.

1607-18 Mic Mac + E Abenaki fought for middleman position trading Euro goods from Nova Scotia to NE.

1609 Champlain joined Montagnais, Algonquin against Mohawk in war to fight French policy - protect fur trade.

[also Iroquois against Huron?]
PhD Thesis, City University of New York 1977

Sedentary villages + tribal social order first developed among local Algonquians under stimulus of Eur trade
Arch: hunter/gatherer, small bands, family unit, seasonal hunting
Hist: long duration, multi-season + yr-round villages + larger communities, rich graves, Indian forts or trade houses + Wampum - Hist + Arch together

Dutch/Eur tried to purchase/control imp wampum prod. 2/4s - mints conquered/controlled/converted production - Pen fines (buy 24s)

Current: Sed, village life, tribes - believed prehistorical "natural state"
(Cohn 1972). Silico wood (1828) - 13 LI tribes
"purchase" culture - Coastal NY - assumed by S. Wood - bul
used wood to lake 17thC savons
Money - used S. Wood - cat 6000 Indus LI - 2nd highest dauq., NY
Every new work reinforces last

Sett - assumed based on maize + improved subsistence; arch supports this by (see above). Oswego + Iroquois - NY + Algonquins S
NY Sett = Hist + Cult

Post contact perceived as stable/stable with tribes, powerful chiefs present for culture
Focus on settlement pattern - as holocene, integrator of culture, etc.

Wampum - special bead: white - Buscoy caviar - knobbled whale; Buscoy
carniolus - channelled whale; purple - Mercenaria mercenaria - only
blue bead ENA - Linni name from use
need fine metal tools to produce - ornamentation, rank symbol
medium culture, plagues/muskrat; + currency - wampum
Standard size - not just conveit but cachet for coinage
"sudden + conspicuous"

Iroquois League - sudden coeval formation w/ appearance wampum 1570-80
No Wampum before Dutch

Crude prototypes: Seneca 1580-1595; Oneida 1550-1575 Euro

About in prehistory

Shell beads extrmly rare in general - 50 not from prehistory's shell
industry - Buscoy also went in prehistoric site
Amassed + shored shells to work up - appear after storm etc.
53 coastal NY sites - Wampum + related shells 42 had Euro

> 4000 m², in twain, g-r rounded sites
e.g. Oswego + Iroquois

Old wood dates - driftwood

Grounded sites by size - camp + village; season
< 4000 m², fewer metrics, no cult

Fish + beav - fish + winter
beaver + fish - winter - better pelt; scarce precontact - so not used as food?
Most single-room villages located over wood and peat.

Storage pits + "Barnes" - little archeological evidence - one site whilst.

No evidence of grain storage - no pits w/ more corn etc.

Small amounts of corn + beans or squash; no evidence of storage or agricultural dependency; sharp contrast w/ Algonquian + Iroquois.

Dutch destroyed > 100 pits w/corn + beans at Esopus; mid.

Hudson; Garoga site on Mohawk; large storage pits + B

Long houses - built for durability. "Fixed place of

abode and dwellings built with beams in the form of

oven... sufficient for several families" Delaware Indians.

"Temporary huts or shanties" "small moveable huts" Vander

Donde for wandering life.

Village sites - also exploited a wide range of fauna from various

ecological zones - marine, tidal wetland, open + woods.

Beaver + otter - were on coast - non-local by 1609 - Hudson + 1638 - Elks + bears hunted elsewhere.

Village base from which hunter + settlers returned to an
Animals overfished who hunted for Europeans for meat - pole, beaver, otter, fox, mink, muskrat, etc.

When evidence of domesticated fauna implies search of wild game

inadequately for subsistence - see to Mississinewa

LJ 1642

Ind in historic settlements experienced difficulties finding local food

1640 - India received "Indian Corn" from English

how fertility bountiful Indians

annual

Echih: acorns - Q. alba, prunus, macrocarpa, bicolor, stellate

limited its thin distribution

Most common biennial - bitter - Q. velutina, coconuts, cubra

history usage - C. atrobrun, tenebrosa, ovalia, ovata

cordiformis - bitter - avoided even by animals

also limited by distribution

Early excavations all sites - villages included maternal w/in ½ kilo.

Quotes - moveable

Early pits - refuse, shellfish, bone;

Few post-molds - others small - lightly built, impermanent huts around

Time on coast - in fluxed by desire to trade for goods

Forts - 17th c - some trade house on bead manufacture

None - prehistoric follow Eur models
Historic - more sites + larger camps - 2 -

All prehistoric sites = camps; all less in size than historic camps = earlier duration.

Postmolds - no polynoids present

Earliest shellfish 8000-3000 BC 6000
stabilized sea level + marshes + shellfish bands

Brown 1974; Newma, 1985

Fur trade - need grew for perm sites - villages near depot
large + more perm settlement (Snow, 1968)

Subsistence model - arrival of econom. Imp system Ag - produced
villages, popn ↑, ↑ social complexity

But some says this is calorically impossible - So people
need 25-50,000 shellfish to get 1000 cal/day

Maize - precip limitation; esp if when silking + kernels emerge
requires irrigation

NUTRITION - P, N, Ca, PH Fish shortage is question.

Vander Donck - 1641 to New Netherland in 9 yrs had "never
seen land manured" "Of manuring and proper
fertility they know nothing"

Burns - Indians said - to improve hush not prepare or curdle
Difficult to reconstruct high yields of Natives in other areas for coastal NY - e.g. VA 200 ac. fields 3 crops/yr

Hudson: 1609 Upper Hudson - storage house beans + maize
2 ships #1 - Oeben - Schoharie: Smiles
Iroquois + Onondaga: Nois production 10-20 yrs

Hudson - coastal NY - Natives had no house; "always camp with them all their goods, as well as their food"
No early reports of corn - yet reported on good soils up Hudson

1643 R Wms: Indians 100s of mi interior brought corn to trade on coast for Indian Money, wampum.

1666 - Indians needed corn from Eng.
Ind corn - for exchange

Safe from humans
\[ Storage \]
Corn cleared - manure; land cleared; liming; weeding; fence to keep out wild & domestic animals; Dutch on NY - abandoned land

1633 Delaw: Ind corn distinct "grow spontaneously" but needed "labor and industry of man"; DeRiviers 1638 "a grain to which much labor must be given, with weeds and earth up, or it does not thrive" After contact - maize grown at a few locations + yw-round In-Bitten but harvests small + ind. for lasw secw. pop'n: little more than incidental supplements to the diet

Contact info - reports + maps few - secrecy; info kept vague
1570-1603 - increasing Eur contacts for trade - fur, wearn
1609 - 1624 increase + int inwig to annual, trade house fur role

Indians moved longer on coast to trade

Verrazano 1524 - family in wigwams, moveable, paddle + fish
Copper sheets - from prior unknown employers
Verr - place names on maps 1526-28 BI = Luisa
1626 - Gomes to NY coast - Florida to north

Florida to Labrador
1529 map Diego Ribero - shows Gomes area - Hudson, with maic
at top, LI area as sound + Narr Eg, CC protrusion with
Coast to Labrador
for slaves in Spain
Gomes - filled ship w/Indians from Narr coulo & fur

Norombea
1527 English boats explored the coast "oftentimes putting their men on land
to search the state of their unknown regions" (Hakluyt 1600)
1537 Pierre Vrignon sailed 800 km S of Cape Breton to Nova
land discovered by M. Giovanni de Verrazzano
1540-42 - Jean Alfonso de Sanbonpi pilot for Cartier's partner Roberval
sailed Eshore of N America, described ref Norombea
French or NY Coast?

Describes French trading fort on upper Hudson 1540, Spanish settlers
carls at Alban, 1550

Mercator map 1567 shows Block Is (Claudia) + Hudson as part
of Norombea - No CC but Cape Breton, NFld, St Law
1524-1569 "Europeans and Indians were acquiring the kinds of knowledge that would shape future economic activity and begin change to local Indian communities."

Economically: Europeans learned location of fur-bearing species and Indians with skins. Indians learned that Europeans wanted beaver. Cartier 1534-1535 beaver pelts exchanged in St. Lawrence.

Saint-Louis 1558 trade for Ticonderoga to Europe with Fr.

Dutch med through Neck 1570-95

1570 - Jean Cabot - Fr mariner. World map suggests coastal N1 thoroughly explored.

1589 Hakluyt map - trail from coast to St Lawrence via Hudson Valley + L Champlain

1595 Dutch constructed settlement on N Hudson for whaling + fishing

1601 English describe Dutch amusing Spanish - learned harbor about isle of Newfoundland for fish, ships, etc. took sale + trade w/ Indians

Gov. Bradford - 1627 - Dutch trading in NY area 60yr and 25 years

Virginia Co. Chart 1606-08 - remarkably complete - SA to Labrador

Spanish passage from W Indies = Gulf Stream
1587 Dutch had helped GB defeat Spanish Armada; attacked Spain in Caribbean & Brazil

Secret trading ships - Dutch etc.

Goaerdi 1602 - Inds brought many furs to trade - beaver, moutu, elk, bear, black fox, reindeer, seal
spoke English w/ great facility

Lescaurbo - 1644-07 chronicle for Fr. colonists in ME+Nv accounts of NY+RI area Indians making beads

Hudson 1604 - trade in lower Hudson - Indians had brass + red copper, tobacco, pipes + iron - upstream more valuable furs

Exploration that Spaniards already tried

People shiped overwinter on Hudson by 1612-13 if not 1598-1601

1613-14 Overwinter on Narraganset w/ 2 or 3 Dutch Co boats

10,000 furs

New Netherland Co formed 1614 - 4 groups each made 4 trips in 2 years

Carte Figurative: Adieu Block 1614

V. detailed Cape, MV? LI as last

Shows location + ID of many Indian groups - commercial + navigational

Mohawks on Upper Hudson

"The French come in a square to the extremity of their land, in order to trade with them" - St. L or upper Hudson

No sett. show coast NY

She claims all names

Does show Wapangoos, Pequots, Sequins - refer to Wequiope

Narr B. to W. (CT River
1626  |  Manhattan. purchased.

1615  |  Fort built at Manhattan — for trade

1609-24  |  Exchange for wampum, the year-round occupation
          |  transformed Coastal NY — active marketplace
          |  trinkets & goods, clothes, tools w/ new technology —
          |  hatchets, axes, adzes, axe & knife, hilt, helbok

Increased orientation & available for trade; reinforced by longer
steps by Europeans.

1524-1624  |  Curved for the growth & intensification of trade in
          |  Coastal NY. This economic development brought significant
          |  changes to local Indians.

Plymouth & Fr. became involved in wampum — for
          |  Plymouth farmers - maize to MB for skins

CT not navigated v. far. Dutch up since Block 1614

1623 - Dutch trade hour 20 mi up CT

1623 - Plymouth + Mass. now built trade hour 1-3 mi closer
          |  Dutch got 15,000 skins 1622

By 1626  |  Eng. + Dutch widely used wampum in trade with Fri + Eur

1627  |  Claims Pequot War about wampum — as base + Eng. rival of Pequots
          |  Peq. powerful & competitors for wampum

Allowed Eng. to expand W + take over wampum
Decision of transhumant hunter gathers to establish more sedentary
settlements in coastal zone that was formed a visitation place
Adaptive advantage after Eur teach introduced

Principal factor - new goods
Fur used 1st; then wampum as desired by Interior Indians
w/sours through
Inexpensive goods from Europe ➔ Coasbl NY for wampum
Inland for furs ➔ Europe.
Required sedentary (after & use + style) + corn
Not driven by corn

"the model for the 'Late Woodland', which includes a valley way
of life and more as, is inappropriate for Coasbl NY."
Sedentism and the onset of more cult in the world
seem best correlated with the introduction of wampum products,
distributed about by Eur demands."

Every year- fewer signs of Indian settlement - Notes from 1882-83
Find site; get info from farmers & locals, go to Mass Hist.
Most Indians - English names + curly hair - Interbred w/ negroes
Most know less about Indian sites than small white boys who collected
Farmers- plowed old Indian fields - rich black soil

1612-13 epidemic- Pawtuckawinakuits - ACK, MV New Plymouth
"Thereby Divine Providence made way for the quiet and peaceful settlement of the English in those nations"
MV escaped King Philips War - Christianized by, Magaw, 1654-90
became friends, Cape + Islands spared
Granold, treated well 1602, This, Devar 1619 attacked - zitihe
or Martin Prins (1603) provoked health,
Hunt took 27 from Mass Bay - inc. Squanto
one of Smith's commanders
Weemohth took 5 from MV
Describes diseases in great detail; az did Barber & Cozzens

Collon 1674- MV - Praying towns - Chappy (separated by, straight) Tis
Nashamoitcas (5 Eds), Segeekonatkit (N Ed), Toikimin (Takome)
Nashuakomnit (Chimot), Telhano (part of Chi)
1720 - 6 small villages ~800 people; a few on No Man's Land
1764 - 313 Ind in DVDs Co 26 Eds, 37 Tis, 188 Chi
1772 440 75 Chip, 25 Seno, 40 Chishaktim, 24 Nox
276 Chi
Cemetery - may w/no stone; others thick plain earth
Buried dead - silk pouch or curled up
Kept lying in wisps right thru 15°C

LW contrast: ceramics - 2 NE Algonquian sites & 1 Mohawk Iroquois site - profound differences in technical systems.

The groups were interacting + sharing information - CT Valley Algonquians had access to similar cultural knowledge + technology - but with technological superiority formed w/ extensive + rigid social structure + similar Potlatch - CT V people - fluid + mutable subcultures; Shift + social relationships - reflected inclines with ceramic traditions.

Active agents of social change not less cult or technologically


Salmon - absent in prehistoric period - colonized NE streams in substantial extent in historic period, corresponded to LIA

Fundamental environmental basis for AS expansion + retraction w/ 110; not pollution + dams - implies factors for salmon restoration.
Chilton, E.C. 2003 (?) Farming and social complexity in the Northwest.

Some archaeologists depend on the relationship between farming, sedentism, and social complexity.

Despite these, there was no sedentism, craft specialization, or permanent architecture.

Iroquois were typical of LW lifeways.

Iroquois centricism, transport, storage, and cooking.

Iroquois pottery more resistant to funnel stress, better for cooking. Alg. - sustained more use.

600-1300 People

Iroq. - villages up to >100 multi-room longhouses

300+ longhouses

Villages permanent 25-50 years

>AD 1200 policed for inter-tribal warfare

Some po-pot Alg. sites - marine + terrestrial.

Sedentism pushed west for short not offer well.

Some few longhouses - not clustered + ran most after contact.

Alg. more mobility + fluid social boundaries.

Pits function as MA+LA; function not all day; short-term.

Food stores + food processors.

Larger + well-defined territories. 100% political structure unlike Iro.
had knowledge + technology to be seen. Farmers
used manu for 800 yrs. - never seen. Farmers
diversity strategy
➔ different project

Assumed community related to subsistence

Flexible + egalitarian, thus orderly, rooted with fuel
hard to get federal recognition
Presentation, Society for American Archaeology.

Brona Simon, Mass Historical Commission + State Archeological
Dr Paul Robinson, RI State Archeological
National Park Service
Mass Archeological Society
RI Historic Preservation and Heritage Commission
Public Archeology Laboratory
Dr Nicholas Pastoloni, CT State Archeologist

Douglas Mackett, NY Office of Parks, Recreation and Historic Preservation
Dr Bethany Jones & Dr Mitch Malinhow, MA Archeological Service

Q. Changes in site size thru time

Regional patterns of sites & periods
Characteristics of sites lacking habitation
Changes in H-G strategy - seasonal activity
Ecological footprint of changing sediments

DD Thesis: Contrast Late Archaic + Late Woodland
Short term - temporary use, seasonal, repeated LI+ broad range
Many LA sites occupied in LW - continuous or return.
LA 149 short term site; 185 seasonal No def Seduta
LW 152
176 41 (none Buzz By, ACK)
CC + MV highest + LW + LA both
short + seasonal LW
little diff - lithic retouch + hunting; diff in fish, lithic, shellfish, story
little cliff - hort
Great zim activity LA + LW
Slight increase in sites LA → LW
Even after hort- maintained seasonal rounds + most sites seasonal
More LW settled sites

MV- more grass pollen - imp resource; or overuse of fuels + fire for dv

Overall- great continuhi land use + ecotone history
Not ever increase pop'n, hort exploit + deforestation.

Paleo 12-10 tundra + periglacial; hunting

EA
Chilton, E. S. and M. L. Rainey. 1977. Nantucket and
Other Native Places. State University of New York Press
Albany, N.Y.

Rainey, M. L. Native American Architecture on Nantucket Island,
Massachusetts. pp. 25-62

2 general styles not historically - wigwam
longhouse

Wigwam - semi-subterranean 10-40' diameter, constructed of baulk
s exhibited tied together, covered w/ woven mats, eaves, roof
or skin doors or 2 curb hooks + something
Some double mats roll vs. sp. poles, bark cover - weavet,
chirp, birch, rush

Longhouse - longer, more elaborate, dome shaped, sapling but bark
covered 60'-100' x 20', lined w/ painted rush mats
up to 50 people

Archaeology - local or seasonal artifact collectors; members Mass
Arch Soc, university field school; members of Nantucket Association;
Cultural resource map co. - 60 CRUs since 1980s

Audubon site 1927 - 66 3-10 cm posts, 22 in 4.75mfr arc
main in pairs - support system

Settlement pattern - not after rotation could occur annually
One site - center reed pole on central support - footprint unchanged over thousands of yrs - left supports in place

Other - 55 m dia. around - small family

Litle, E.A. and J. C. Andrews, Drift whales at Nantucket. Two kinds -
of Mosshup. PP 62 - 84

Note: Originally published in Men in the Northwest 28:1-16

Drift whale customs, scenes, songs emitted - ACK, CT, RI, MA, NC -
important resource

Crewecoror - "saint of the sea and expert mariners"

Dutch & Eng Whal Fishery - 13th C Bascoman or Basques
1609 - along-shore whal in Gulf St L
1610 - Champlain - Bascomans whal off New France - have more laws
No whales reported 3 of Del before 1750

Eng settlers - Indians didn't know how to whal at sea
Whaliny began off LI 1667

Indians in canoes helped stray whales in embayment
Basket 1742 MV "Mosshup, their legue-days whalman, was kind to them,
by sending whales &c. as near to them he can"

Drift whales numerous enough no need to go to sea
1/1 whal/yr ~ 13 metric tons today, despite lead abundance

ACK - 1673 - "all the whal fish or other drift fish belongs to the
Indian Sachima" also some on Mo + LI - full rights unique

Indian Sachima" also some on Mo + LI - full rights unique

The
Eng - Whales royal fish

Ack - Inhabit more possessive over drift whales than land

Ack - NY until 1642

Sachems - each had 10 men to assist in drift whale whaling

1620 - Pilgrims - Ind cutting up spermus "into long rows"

Bradford - small drifts common - Natives cut up

Williams "Hu Natives cut them out in several parcels and give and sell farm and meane for an acceptible present, or drick"

MV - Ind oft did drift right whale's reserved bone

No records - Salem, ME, ENJ, Coast S of Del

Wesque "whalebone"

No prehistoric harpoons on KC - exclusively small if bone, hog

Right whale distribution - controlled drift whale, along shore whaling, and pelagic whale, cultures, temperate shores - slow, rich

in oil, doesn't sink when killed

By 1760 "Whales appeared generally to have deserted the coast"

ACK & NBed - 19th C world culture

Along shore + pelagic whale, cultures up to 1835. - aim to disdain
of recorded drift whale by Ind. 1

Leads whale, ports 19th C not chief mercurial or fishing
ports - Phil, Boston, NY, Salem but they near recorded
Ind drift whale ACK, NBed, Sag Harbor
Ind of MV. NACK, CC, LI - key role in growth of whaling

Supply of right whales + labor pool of Ind w/ maritime
aptitude + interest in whaling

Along shore grew from drift + theoretical from along shore

Rt whales died + stranded on shores they frequented

Inshore SENEFEU (also Del Rey) experienced more

right whales than off E Coast and of Gulf Stl

Dead right whales -> drift

The paradox of local production without the use of political belts pp 127-152

SNE principle area of Native wampum production but 
limited use of them for diplomacy

Dutch trade SNE + Membury - brilliant summary by MeBrick 1558

Chilton, E.S. The origin and spread of Maize (Zea mays) in New England pp 159-179

Mobile farmers + long continuities of hunting + gathering

Maize prevalent only after 1250 AD

Maize: imp for undetermined relationships, sedentism, farming + social complexity

Tehuacan Valley 5500 BP -> increase sedentism

Moved N at not all societies adopted - depended on pre-existing subsistence + mobility, ecologic setting + hist. fact.

Not obvious or easy: labor, risk, change

Haiz de Ocho - hybrid teosinte + 12-14 mw

Other domestics: Chenopodium, amaranth, kochia, live amaranth - all need mesic vs. coso -

peletes + dishes 

vegetables + storage 

shells + ceramics - coincident

Weeds

think of

No everyday domestics in (increased sedentism) vs. tendent

Polya. 

No possible example for change ->

Soapstone bowls 3500 + story plate - Late Archaic

my medical host - Circumcision
A: highest pop'n to that point, pop'n pressure? So search for alternative foods, new technologies; connect with hum

Maize assortment: (1) C-14 kernels; (2) C-14 wood charcoal; (3) storable into bone; (4) animal pottery residue; (5) pollen analysis, landscape &

(6) Archeological setting (completes)

Earliest ENA cult - Holding site IL 2000 BP
Lower GL - AD 500; NY AD 600; S Ont + NY AD 1000
NE - Prevewl 1250 AD
Beans - arrived AD 1300

Old wood issue - C-14 dates on charcoal too old

( must be big tree + old forest - how would indians manage that?

C-14 doesn't tell introduction - might be flux log, beehive
need flotation, intrusive sampling, burning, id.

14 samples - some incorrect ids

Most 1300-1600 like Little

Ingalls site NH - 1019-1189

1 Not all reported maize = maize

2 Not all maize is published

3 NE may not be simple W -> E Mag by via STL+CTR

McBride + Dewar 1987

Non-event vs major transformation. - EC imp - but "No evidence for sedentary yr-round farms, villages in NE" "no evidence for intwixt maize hort. until after Eur coll"
Is evident for year-round habitation in protected harbors beginning in LA - not a short but year-round availability, marine + terrestrial resources.

"The modest resources of maize and lack of evidence for land clearing [on the coast] ... argue that maize was probably grown in small gardens near houses with southern exposures."

EDRF - but what of Pale + Early MA sites now inundated? Why didn't coastal emerge LA?

Little - old shell + alluvial limaturn used for fort to 1850

BROAD - maize more prevalent due to cultural or Medieval Warm Period
Cultural, natural + aesthetic considerations

Need 1. Accurate dates 2. Accurate chronology of site subsets
Changes C understanding imp enviro

Be lb Little - one of few publ. in Am Anfolog. 15
Little E.A. Limestone, shell, and the archaeological visibility of maize and beans in New England. pp. 181-209

Documented movement of people to the coasts + rivers by AD 1250.
Hyp - by 1290-1340. Indians had learned to use old saltpits + shell middens + limestone or FW mussel on alluvial floodplain to yield beans + maize.
This + preservation + visibility.
People in warmed part of landscape (rivers + coast) coincides w/ onset of LIa.

Middle material used - soil, shell, charcoal, bone.

ACK - 1659 27 Puritans + families - 1500-2500 Ind.


Inds worked cooperatively + reciprocally w/ Ackers - not exploitive.
Arch. tools - not characteristics of North + before Eur Ag practice - Soils leach rapidly w/ deforestation + plows.
Maize on alkali fields.
Cronin - Changes in the Land

Changes Notes to include

Ag 3 of Kennebec River according to Verazano 1584

ME - 1/2 of food from river + sea + rel. nuts + berries

[DF - like coastal Indians - reduced direct impact on land]

We still see them in villages but disbanding into winter family groups.

Understanding the distinction between SE Indians is as important

as that between Indian + European. Critically important if

we are to understand the pre-European landscape + have a benchmark

for mast

41 per 100 square miles vs 287 - 7x

DF - critical period BA - arrived history + thin chestnut; emergence

of bowls + technology for more complete processing of nuts; larger

storage pits; critical for smooth out seasons

But not communal - dispersed.

Multiple corp - diversely, less risk.

Hemlock decline + oak decline - flourishing of mast + mast

associated taxa

Native weed use - when did these arrive

Mast + weeds pre-adapt for corn; preparation, storage,

modest cultivation.

John

Punishem importance of Ag - calendar

Women - 814 of food 2560 bu/ on 1-2 ac.

1600

Village - 8500 lb deer 7000 lb bear
Indians didn't burn - no Aa, less tied to sites, less inanimate to alter environment. Canoe travel - forest less adapted to repeated fire + too much fuel - no control.

P51 Dwight description - re-read

Contrast mobility of Indians with fortress of English

P90 - Regrowth of forest with abandonment.

Indians reoriented activity to trade, shift military balance among villages.

Role of Indian trade - gifts, friendship, maintain political/economic alliances, diplomacy N-S, coast-interior, but local - no entrepreneurs, classes new trade assimilated into this conflict.

Springfield MA - little worth for trade by 1650.

Meat trade large by 1630s - 1672 turkey van - Jesselyn.

1630s - new sedentarism - SNE Indians on least year-round; conflict -> forts
reinforced - fewer foodstuffs; cloth for fur; more perm fields; less ecological diversity
late 1600s - cattle over deer

What does this mean?

58 Village lasts usually organized along a single warchief.

Village - political + ownership with - used various times a year; ecological faith
Eur - girdled, plastered between; burned open land dryier, & snow, easier to burn

1634 - animals crowding Cambridge

1631 - Wm Bradford - livestock having a big impact

WC - cycle of dynamic and changing relationships - environment & culture of their lives

WP 5' diameter + 250' tall

31 - Indians for 12,500 yrs.

WC - village base leads to political & social misfortune - village + tribal

Lead to a literal reading of Wood, Verrazano, Marten

Archeo & Paleo puts history into perspective

Changes emphasized - subtle gradation vs. sharp, not rapid ramp up of activity after corn but slow chy until Eur settle

No conflict - big diff w/ Euro
Notes on Cronin

Cronin - Changes
6, 12, 13, 19, 23, 25, 27, 29, 30, 32
33, 37, 38, 39, 41, 42, 44, 46, 47, 48
49, 50, 51, 52

Does he recognize changes in Indians over time?

Ecological history - used ecological sources

Dynamic changing relationship environment - instability

We mixes movable villages (> 20) with corn production; desire for natural products + reliance on cult. & dispersed durum; summer who come grown; moved places, added esp. etc.; not perm settled

Pythion - month naming stored food for later use

WC actually has most of it correct, but by missing the central part he misses it all.
Start with cone bio - desire to conserve openland; farm & early successional, shrubland, young age classes - range from sandplain grasslands, heathland, scrub oak, young forests

Application - fire, mechanization + fire → structure age, open; savannah; parvlike

Indian decline → impact from: 1) contact; 2) wildlife habitat; wildlife; msc/ & successional quality of NE ecosystem

Indian fire + consequences - Cronon, Pyne, Day, Denevan edge -hya of wildlife

Connection explicit in may mgmt guidelines + policies also ecological - few hundred (+)

Pr: ecological - few hundred (+)

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Understanding of Indian history & relationship: conflicts, understanding of nature pre-settlement - was dynamic but driven by physical processes - hurricanes, winds, ice, & climate change.

Landscape - dominated byOG & mature forest.

WC View

Anthro View → People changing

Land almost changing in response to humans.

Nature at time of Euro settlement - timing is wrong, plus ignores trappers, hunters, & beavers.

Pre-Eur Dynamics - forest, edge, v

Post-Eur Dynamics - Deforestation & habitat

Patterned land - flows & slopes, not flat

AS

Wildlife Curves - DEF is Dick DeGroot

Cons. Issues & OP

W, W, F - wilderness, resources, culture

WWF

Global Change Future
Cronon on Raup. P.151 Finite #26 -

Raup argues that wholesale configuration of NE landscape every year or every 10 to 20 yrs was inconceivable. WC countries failed to account for reduced fuel load in these forests. "But Raup was no doubt right that the totality of southern NE England was never regularly burned; I have limited the claims of my account to the local vicinity of village sites. A recent article defends Raup but basically confirms my emphasis on local burning."

IE WBRussell 1983.

Cronon misconstrues Indian settlement patterns - getting dwelling + family bonds, movement patterns correct but misinterpreting settlement pattern as village based, subsistence as too strongly centered on maize and evidence of sedentary lifestyle as confirmation of agricultural and maize dependence. Leads to important key elements: misinterpretation of political + social organization as village, tribe, etc. rather than familial and federative; sedentarization as tied to land for farming as opposed to mixed diverse habitat - continuity of freshwater, brookish, and saltwater with access to upland resources; and therefore too strong a focus on land management + active use of land.

Emphasis on established main diet x9o calories - required need to organize large 1's people, rooted to site, accumulation of goods, tools, food stores etc, active farming + fallowed land - Active-use Heavy imprint of people + gradient of use emanating out from village sites with 100's of people - large fields, fullwood collection, burning to improve habitat travel, settle, defense. Focus emphasis in Cronon seen above

1 In its extreme, which WC was defending agaisnt this led to application across SWE landscape and beyond. To literal reading of Morton, Wood, Verrazano - and interpretation of broad landscape as controlled by
and managed by Indians, mosaic driven by their activities, especially of fire, land clearance and agriculture.

Interestingly, also led to interpretation of ecological diversity as governed by habitat controlled by man rather than nature and the human control. WC - dear principally dependent on "edge habitat" and land becoming more wooded + less hospitable as Indians + from disease, moved to coast etc.

Interpreted by biologist + conservationist: as producing maximum or expansive "edge" habitat at settlement, losing some of this as Europeans settled and dichotomized landscape into tamed + wild, increasingly led to competition deer + domestic animals

Extreme view - Pyne on one hand - fire, open land, kaleidescopic; wildlife matrix - book by DeGraaf + Nolte - chirogram

Strong influence → ecologists + conservation biologist.

But Qs: why no longhouses + substantial structures? Why so little evidence of Ag? Why so few villages? Why so little evidence of fields etc?

Overemphasis of history - not entirely wrong or biased - but incomplete, temporally + geographically limited, snapshot of dynamic landscape

Archaeological + Paleoenzological: Informed by history. Provides framework that puts history into perspective but that provides a different understanding of subsistence, settlement etc. patterns - orients them more to the diversification of resources, places people in the land for these, not Ag, yields Ag as a supplement, mobil. This route usually technical deeper in time rather than tied to new crop.

Reorient focus to diverse resources from land + rather than constraint specific crop, spreads activity, diffuses effort, makes this part of
a long continuous pattern. Reduced focused impact on land, need or desire to manipulate land.

Changes the spatial and temporal distribution of human impact. Rather than focused with strong gradient, dispersed and subtle.

Time - rate they ramp up broadly with corn etc. ramped from LA to Woodland Period, and that for broad subsistence but only focused on corn etc. 1500s -

Big ecological repercussions / contraception

Imp social cultural underpinning - no major conflict, not tribal, not villages; family groups - mobile + interacting

Choice - aware of Iroquois - not adopting

Ecology enveys - interpenet - not open + edge; deer doesn’t prove that if deer - hunting has always controlled deer - deer + with settlement + concentration; deer abundant - suburbs, low corn, PA woods - not tied to edge.

Beaver + Moose - SNE - large pop'n; staging; constrained the by

? Hunting + habitat? Through forest - continuous; openland - colonial.

Colonists early - land cleared, fuel wood, selective harvest, houses in landscape; 1541
Changes in the Land

At some level seems incongruous - heavily forested landscape + abundance of people + species - need + desire to conserve species, of openlands, young forests, of non-forest habitat and of diverse forest structures - habitats or vegetation types - grassland, heathland, shrubland, savanna; diversity of forest ages + structures - recently disturbed, young, middle, old; along with savanna; open forest.

Overall: ecowhisk landscape diversity - break up continuous forest; create more mosaic of habitats.

Application - diverse - cutting, mowing, brushpicking but especially burning. kill trees, open woods, remove savanna, open forest, early succ. habitat + thus burn.

Intriguing - heavily forested landscape, allow land to sit + will revert, allow forest to grow + will age + mature, larger trees, older trees, gradual increase in mature forest app - over succession; Ateatos forest, difficult to burn; incidence of natural fire is low, so what is driving this?

Historical interpretation - Native American burning - frequent fires - to clear for ag, to open for travel, to increase habitat, for defense, offsite; utility to manage the land, diversity it supports; if not such diversity, then do 

Phenomenal changes - with functional maintain diversity + increase productivity, Indians seat in villages, diff in north vs South, curbed around agricultural activih; large pop, fixed sites, invasive land management - need to open land, need to many invasive for diverse resources, invasive use + need for defined areas of ecological xfr friction. Led to extensive tracts, areas, broad areas of mosaic - successional ages; open woods; Edge habitat

Permaunrt villages. earliest Diet Milhurs

Arrival range of descriptions - most elegant + best articulation - comes from Cuvioni - more extreme from others - Demanv, Pyn, 

Loss of this diverse mosaic - 1 step process - first decline came with decline of Indians - disease and loss extirp...
Cronon - Although central there is one of explanation between Eur + N Americans there is another fundamental dichotomy that he underscores. This less obvious because it is embedded in Indian story, but it is a critical element as it imposes a fundamental break geographically and temporally in Indian history that travelshu into major behaviors that come to shape the ecological justifies + geography in land.

Dichotomy between S + N Indians: While both mobile in landscape + utilize the diversity + bounty of the land - fundamental differences in subsistence, social organization, approach to land and impact. N' N entities dependent on land for resources. Small dispersed groupings, highly seasonal ad due to severity of winters, lack in food. Food leads to starvation, population on check and light imprint on land. With mobile hunt + gathering strategy no sedentary no need to manage or shape the land.

"Farming Indians of SNE" Their ability to raise crops put them in a fundamentally different relationship with their environment. In contrast SNE pop., at completely unspecified time had become farmers. They had adopted maize + in part to take advantage of this and in part because of this led become sedentary as assembled into village. Principal groups of farm bndd (foo) food base allowed preparation for winter, storage of caloric food for lean periods. led to a survival + % increase in population size. Larger pop. + need to find crops led to have villages - permanent structures that all traveled into v. different activities - clearing large areas familiar 1-2 ac into cornfield fields + tillage so mosaic active field + student held's extensive use of fire to clear forest, rejuvenate fields, open woods, collected resources many led by diversity. Extensive wood collection - so even a need to move in winter. Corn with them + in trade.

Huge dichotomy - In many ways Indians not that different from Eur settlers - 1/2-2/3 of diet provided by corn, much less need of rest of land use. Much larger population - 50% of area but 80% of NE pop. Product for trade w/ N Indians + as an initial basis fur trade with English + the basis for fur trade.

Need + incentive to manage, much greater need to control land. No incentives towards land.

- Conflict - territory unclear - fight in winter
November 6, 2009

maize + assumption of this activity if no need to move like this if harvest then why did this happen? 

3-5% duration teno 2008 -1200s

Implication that it was long-standing - like corn - present for 1200 AD until 1500

yest,匈奴 related, but if indeed, tied to farming = maize the amount?

New activity - maize only a couple of hundred of years - so were all these patterns new? Question just developed + not only for a couple of generations?

Wildland + climate + geography - Margarita Island for diverse & productive

Overall - landscape random, human structure, other factors

Underestimates role of mast, people, animals

Disturbance - ignores because yet 20,000 today despite importance of local population, i.e. wind etc.

Loss of beavers like loss of bird biodiversity

Movements - sedentary to mobile - need to run out of land & overexploited

For a socially responsible and sustainable future

Archaeologists - long recognition of discordance between archaeology & history

Lead to major confusion on sites; much of debate on corn + Ag

Conclusion - historical accounts - not basis for full archaeology. Interpretation - much change but much change + new. Conclusion - no villages.
Pop'n fluctuations + active - with biophysical changes may of largest
changes tied to these + cultural + utilization of new cultural activities
Thoreau SKV; culture; storage
LA explosion - warm temp, timber, forest - pottery + gourd; role of nuts + wildp
Transition - decline in sites with moisture + soil
never mentioned by WC-people
Iroquois - adopted corn + villages, longhouses, never came to NE; came but
rejected - NE away, utilized some corn but never adopted - conscious
decision. Ag - liability, difficult, risky, less flexible
Even why NE sedentary still based on natural, diverse, spread across land so
not requiring intensive land use.
So w/o Ag, w/o fixed villages, with small groups + low popings + mobility
no need to use land this way + manage it; w/o villages no local area
to burn; agreed w/ WC on NNE.

His interp - from history; long contact with fishy fleets; trading + exchange;
cultivants to coast, to maize, to trade, to increased permanence, to pop'n
on coast - great need for food. Big part of trade + living.

Pre-adaptation; trading + exchange; maize; coast - subsistence

ECO
12 SK 1475 Wampum + Gre
t. Social, physical, political, economic transformations - trade, conflict, shift to
commercial, disease + depopulation, forts etc.

Overemphasis on history - accounts compelling - bias in both but big differences
Arch - longer, democratic, (not just in terms of power but those exposed
to expropriations - beyond them w/ experience, language, outgoing)
WC ecological history is linear - but trajectory not flat - colonists simply
a changed + changing landscape - little understood (WC quote)

Pilgrims - good land + forest on SC (south) but no harbor.
So ecological interp - Indians invisible, abundant, natural disturbance; big
physical; diversi'd, great. Beaver much impact on forest + landscape
than humans. Forests old, structure natural, diversi'd due to natural
patterns - wetlands, natural disturbance.

Not no NNE impact - subtle, reinforcing, parallel, few occasional - still pass
important. Hunting - moose (wolf, habitat?) kept low?
So old forests + largely natural process; LT change climate
No major change with loss of Indians; major change is in loss of beams
v. local village + new human activity; pop'n didn't + fairly rapidly
but did have major impact on land + hunt + fur trade.
Different views, M. Neighbours interpret DEF in

different ways. General habitat, small scale, gap dynamics
and forest-based in DEF unique to current predominant condition in
old forest. Early successional - gaps, big blowdown, edges - streams,
lakes, coastlines, wetlands. Role of burning important - wild
fire dynamics + shows exp. Much less uptake, then early succ.

Natural cycles. Early quotes on forests:
1. Fire, grazed etc. with Euro exploration.
2. Girll + clear, coppice,
3. Degraaf + wildlife dynamics
So need deep history to understand.
Lessons from N. America:
Continuity, diversity, cavies, disease, trauma.
Lessons from deep ecological history.
Rates of change.
Ecological surprises.
Long continuity + slow change.
Needs to incorporate colonial history + forest destruction & renewal.

Conservationists - easier to manage for fire + Indian activity
than Europeans. Despite the fact that over 100 if DEF covered
would have been novel, short duration + due to cultural
spread from other directions.

Fundamental ecological distinction with France. The natural ecosystems
arranged almost randomly on landscape with continuity dependent on the
Disorder whereas human systemized this. Improved order, even if mosaic
Pattern around village organization and seasonal practices. In DEF natural
landscape highly ordered + structured; shaped by geomorphology, soils,
forest type, topography; natural displaced less structured - at multiple scales
responsive to landscape - beaver, locusts, foxes, etc. Indians only
reinforced this; but now, cattle, not ignoring this + took no less -
topography, biodiversity, etc. - Manhattan to local houses.
Changes - Notes

natural ecosystem arranged almost randomly on landscape w/continuity depd-
on this disorder - human systematized this.

No - natural landscape - highly ordr + structured - geomorphology + topo-

Moist, moister, wetter, cooler, wetlands - Indians oriented to this, structur-
it and slightly[...

Sedimentary = bases used 1/2 years vs permanent & rooted; highly mobile]

Maize + sedentary of coast - adven developed first; connected to

A principal social and economic grouping for precolonial / New England Indians

was the village, a small settlement withperhaps a few hundred inhabitants

... villages... were the centers around which Indian interactions with

the environment centered.” But broke up and reassembled.

Mobility was key. Winter extended longhouses with many families.

Crucial distinction between Indian communities was whether or not they had adopted

Ag was

agriculture.” E. Kramer R. — cit. View, 1524 DRE but for N and same as major

or Abil. grow crops - drastic implication for rest of food - gather - do start subs.cities

Still villages

Thus, ME - Ve bread River teads = nuts, berries = kept into bonds + hungry in winter = pop

low pop'n - little impact - 'rel. little impact on ecosystems + stable system

low pop'n - little impact - 'rel. little impact on ecosystems + stable system

“farming Indian of Southern ME” - dability to rais crops a put them in a

fundamentally shift relationship with their environ +" cony pop'n thru winter

Grain made up perhaps one-half to two-thirds of the Southern ME diet, thus by reducing

Southern reliance on the foodstuffs; in comparison, Northern Indians rely mainly on grain.
As important a contrast Ind Eur 1 sce = W NE acc. Men imp in terms of understandability "natural" as benchmark for pre-Eur landscape + for guide to myth

100
48/59 mi. vs 287 7K

All based on historical acce

at all told to obtain two to three times more food energy from hunting + fishing.

Ne W storage - starvation much less severe in S.

1. Overunderstands + misrepresents role of corn; 2. Fundamentally new food item for 2-3 centuries + 5% duration of Indian presence; 3. Underestimates role of

most in S - chestnut, hickory, oak; climax of foods thru winter;

hunting + collecting; 4. Miscalculation, food cliff S+N Indians

most - food difference

Arrival - hickory BK + chestnut BK at critical storage pits from HA

onwards; NC - grain - smoothed out seasons YS." Archaic, mast

pottery assoc. mast + native weeds - Cheno, Poly, Amorath - not even mentioned

by WC

"The crucial role of agriculture in maintaining so large an Indian population in

precolonial NE is clear; although agricultural and nonagricultural peoples

inhabited roughly equal areas of southern and northern NE respectively, those

who raised crops contributed over 80 percent of the total population"

Based on date names - Pynaston "- an indication of how much agriculture had

transformed Indian life then." Eva Butler 1945 pub "& Day

single woman = 25-60 bu corn 1-2 ac - women big food

fall - preferred season for going to war used for & other materials - so much more than

meat this material survival" 400 village - 5,500 lb deer 7000 lbs bear - 1/4 meat "whether or not essential to economic

"But in clearing land for planting, and thus concentrating the food base, southern Indians

were taking most important step in reshaping and manipulating the ecosystem."

annual reoccupation - field for 8-10 yrs so heavy use around village - move for

winter or summer acres stripped of wood "in 25-30 leaves trees less land

Narr Big j Higgins - things of trees at near Black "they were observing the

effects of agric. Indians returning to fixed village sites and so consuming their forest every supply."

Regr Wms - Indians move for wood
Open + parklike - burning - annual fires - quick willow 7' - didn't involve
large trees - drive game, clear land, push off invaders, improved hunts.

N indians did not engage in burning. "Because they did not practice agriculture
and so were less tied to particular sites, they had less incentive to alter the
environment of a given spot." Cannot travel so less need for new forest
N forests not readily adapted to repeated fire +/- too much land - adaptaon

N forests burned - I Andespean; I nutrievs, I light, I warmth
"Selective burning thus promoted the mosaic quality of NE ecosystems,
creating forests in many shift states of ecology, succession." In particular, small
fires produced what ecologists call the "edge effect." By encouraging the growth
DEF but is only wildfire burning - why succ + edge? of extensive regions which
resembled the boundary area between forests + grasslands, Indians created ideal
habitats for a host of wildlife species

51

Only early 19th. observer
Only Timothy Dwight able enough to comment on this! fire created
pastures - + available food, attracted animals - + biomass + small mammal
+ birds, I carnivores. "In short, Indians who hunted some animals were not just
taking the "impacted benefits of nature" but an important source by being factored
fed until they had directed new instruments in trading;
"Indians practiced a more distinct kind of husbandry of their own"

51

We still emphasized movement as lowering demand & impact on ecosystem
"For NE Indians, ecological diversity, whether natural or artistic, meant abounding
stability, and a regular supply of the things that kept them alive."

Move from habitat to habitat to find more abundant, thus minimal work + less reduce
contact mobility w/ fabric of EN - but initially insufficient w/ EN

Control conflict - 2 ways of living + using resources + interacted w/ environ.

We correct but incorrect in interp of Indians; already pushed NE Ind into
Ironore or semi Eur.
Even when sedentary - drawing from diverse resources of water, land, sea - not Ag, no not land based, no need to manage land

Can't have both Ag - 2/3 calories + mobility.

54 Harvest stored below ground - wait return

No surplus property - poor in possession - rich in foods, lands resources

56 "Francis Higginson "neither how thy any settled place, as Townes to dwell in... but they change their habitation from place to place"

57 Winthrop "they include not lands, as the have they any settled habitation."

R Wm. "they burnt up all the underwoods in the Country, once or twice a year."

burning woods = improvement + claim to land

Village - political + ownership entity - used various times a year

Sashem = leader + village political identity - but fluid set of relationships

loose hierarchy - larger confederacy for conflicts - ecological hierarchy

Gifts - crucial lubricant "village lands were usually organized along a single watershed" - scale?

60 land used as ecological commons

80 Not one owned + other didn't own land - land it diffused, but wary

83 Year = nine families for trade - Narr. Bay. - 1626 - do not for weapons, goods

1600 - every exploration - Indians eager for trade - Gosnold - about known city, market for rabbit - Champflem - Rutherford

Indians receptive activity to trade; shift military because some villages did "it is important to understand how little we know of this early fur trade and the diff Indian groups at different times & ways" - Met 15th C = fur trade lessons "learned primarily not from men like Champflem and Gosnold but from dozens of unknown visitors who left no record of their trips"

Explorers found people speaking Bouquefr,. Eng.; Pilgrims - clue even w/ blood bar in red powder "killed on an already lands ad continuous exchange between people on opp. sides of Atlantic" - disease

Ind migration hit hard out parasitic; low popn; no domestic animals

How early do we think NA was 1650 - but how?

kinship networks Social disorganization >70K to <12K by 1670; NNTT 15K >500
political instability led to new political leaders; undermining spiritual & religious

culture to take over world

As Ind villages vanished, land transformed; Gold in years 1670 - forest

regrowth into "ragged plain" because it hunts & winner to clothes of European

use Gold phenomenon

deg habitat - began to return to forest - received in 7 animal skin

-blame animals on succession, not hunting/keeping - yet tales of fur trade

evens, animals - fur trade that depended on land.

Ind trade gifts, friendship, maintain political/economic alliances, diplomacy

ICeW; Inter or even Coast;

but u. local; no entrepreneurial class; local among individ; & sickness;

new trade assimilated into this context

mea goods, reconverted to new uses; become diff objects

"eg. product had been the major元素s odified by a Ind, but trade w/northwest

The evidence for this - we just argued that trade is local & small

Colonial new corn trade accumulated corn local ten trade

the 17th c - corn element of fur trade - trade to S New Jersey

corn for NNE furs - but scarce as commodities bulky, value fluctuated

with production, NNE ability to yet own food

Wampum - jet discovered value - Dutch 1622

Trade to N - unclear why, each great value - "priciness"

Goods LUS Sound for wampum 1/3 N for furs - Suffolk Papers 1687

Wampum - military tribute corn, wampum, furs, provisions

for which the value among wigs were accumulated in precolonial times - why they were

exchanged w/ south villages for corn & offer goods - trade between villagers,

held in check by need & politics from Champlain

four trade changed relations "enough to turn whole into its leading

governor of N.E. foremost animal"
Bears were abundant in ENGLAND, low reproduction rate, and hunting

1650 - Sackville MA lost to fire, little water, low after 1670.

Meat trade and need - less by 1650.

Overhunting & edge habitat - Decline from much early in 1700s.

In 1672, Percival Tait in New York.

1650 - closed access order.

Late 1700s - Dwelling scarce below 44°.

1670s - ENGLAND occupied coast year-round to develop a shellfish for women.

"New Scallion" reinforced by conflict to prefer Forted sites.

Gordon forced "too slow to get food in forests by which means the men
brought to such straits and poverty".

Living in Acid lands - more perennials. "Dwelling on a narrow,
broader for needed foods; 4 guns, metal,
more pebbles, fields, less of under lands, less soils, diversity.

...But WC actually regards three corn earlier - corn is half to fully colonized.

Late 17thC - domestic wildlife 6 cattle 4 deer.

"The keeping of cattle.

Ind land further decreased the forage available for wild deer herds and so
continued the erosion of human resources.

18thC - New Ind to greatly concern animals - [but earlier - Ag in ENGLAND]

habitat + 1 resource] 60 more fur trading.

"Low Ind densities meant better hunting ad for that reason lower concern

of the very animals fur. Most desired were for more
active to 1st and E Can. that it was furs, not lard.

Furs bigger - more transportable.

Collapse of old beaver claims - great benefit to colonists - trees died, good

[we didn't realize this happened naturally] will, hay - up to 200.

...Beaver loss greatest ecological change to NE landscape] 35,000 in MA

..."The death of the beavers in fact paved the way for the non-Ind communities that would grow."
Indians exaggerated the peace, love, and harmony of precolonial Indian life. Europeans in the 1700s. "The times are everywhere seen in the Times have turned exactly upside down, or rather we have changed the good Times. Chiefly as to help the White People, for in Times old, our Four-Fathers lived in peace, love, and sweet harmony, and lived contently in Great plenty. . . But alas, it is not so now, all our fields, lady, and towns, are eating away."

"Now borders and maintained land fires tended to burn to forest as land papers expired. But ore environments were also modulated reduced, and on a much larger scale - by clearing, an activity to which Eng settlers, with the herd prop hounds, needed for the corn. When then had the land was which arose between forests or fields, the corn and corn was very to reduce or some when lives it, to replace - the small peas and I had cow intercalated them. The draping of deer, turkeys, and small animals thus beforehand not much a new high economy, but a new level."

ME + NH - also Riex - WP on old forest fires

Forest management fubhik - so w/ cleaner

Grazed forest - cut + burn - describes process - plant among trees burn for few yrs, trees eventually return - long years

Cut + burned - use of fire to clear land - borrowed from Indians - but applied for drift purposes - much more widespread

new land - clearer = more resistant to burning - & snow - Simons, 1976

127: "One must not exaggerate the difference between Eng. & Ind. agriculture."

"Their meat imp crop was the same maize grown by Ind."

big diff was use of animal
Wm. Wood: "The timber of this county grows should not call for trees, but for trees growing closer together, and that the soil be high, before they can spread for the thin ground is good ground in abundance, with excellent good timber."

Cc typical forest - scrubby trees

but pines favorible, the b. Smith - caustic black earth + good flocks - but near not to settle [due to harbor]

Regular burning maintained pp forest

Recreating areas - "WP, hem, bee"

Effects of fire - not limited but

"Indians made sure that the were very wide indeed. Throughout NE, fires which destroyed substantial portion of a broad forest corridor the condition of full sunlight which species such as birch, w.p, and various others be need in order to flourish."

When I walk through a forest with little or no older wood

knowing "he was prod. desc. by the sight of an old forest in" WP - 5' diam 2.50' tall

B1 Pri-col. Hardgep - "a patchwork"

Deep time - Indians 40,000 yo

unique linear separa...

Samoset's welcome Englishmen greeting Pilgrims

Gasque's 1602 settlement & "sacred worth my Takào"

Unable to ship to NE, but only 2 encounters - Verazzano + Thevet

Friendly start the terminated - misunderstandings, kidnappings, displeasure at staying

1600: Italian dress & sword - Indians kidnapped

Hope of finding Indians completely unaffected by Eur trade goods, fruitless

Efforts unite - geography, movement, partitions, re-groupings, mergers, dislocations, pop'n shifts w/ disease, physical mounts, shifting pop'n centers

Eur varied in treatment - some lumped, some divided by water-ends

Narragansett - King Philip's War until King Philip's War

Speak different wear - Bay, Cape, MV - unclear

Cannot study effect of Eur contact unless we knew what pre-contact cultures were & they written they comprised

No arch evidence for pop. pressures for Ag adoption.

Coastal ME- maize was possible but not seen in prehistory.

Assumptions - early Ag development would spread rapidly as far as enviroment allowed.

ENA - early crop complexes independent prior to maize from Mexico.

Much more complex - not single pt or region.

Tools - wood, stone + shell.

Soil limits to finely textured loams - alluvium, sandy loams, loamy sands - well-drained + dry in spring.

Dry reduces soil T° inertia (germination + seedling growth).

wet + cold - ↑ pathogens + fungi.

Max growth season.

Predictability - most imp.

Northern Flint / Eastern Complex Corn - developed FNA adapted - cool T + short season; short chkt + Ivs.

Summer heat imp - crucial mahi, - grain yields.

GDD = Mean Daily T° (°F) - 50 Base 50 Method.

Beans - requires fewer frost-free days.

GDD = 2000 - mahi thresholds for 1st c corn.

Infertilization - non-issue as swidden not limited factor.

Lift - ↑ variability, ↑ GDD, ↑ growth season + frost-free period, ↑ warmth 1730-1829. 3d dev. 1850-1879. 4th dev. 1880-1939. 16 days.

Enhanced variability, ↑ risk of consecutive crop harvest failure.

Seed supplies + emergency food soon w/ frost hit = worst.

V. poor.
I GDD occur per day

Growing season Ta began to decline n 600 BP

Need monthly or less data to really understand

Fluct around decades trends - not consistently related

Plastic not just bio-physical - but cultural as people need to decide

what to invest

1. Minimize failure - plant on hillside precip areas damage, near levees, on

well-drained sites, S+SE exposure as max summer insolation

(Improve - move to hilltop slopes NNW); Crawfish Basin: 30

Coast - longer growing season - but both brick brack tP - only SE can wp

Maize n absent from most coastal sites (except from below)

2. Dietary diversification - 4 meat, fish, fruits, traditionally settled resources

Invasive - Indians burned to maize only site control w/ Euro diseases + organic

Suicide allowed maize purchase

Adapts Ag - requires totally different living, loss + alteration of wetland

adapted to rivers/wetlands + maize resources - poor for corn

Inland - more to gain, less to lose - so extended further N and

Encounters - transformed human geography

"for the most part, it would seem prehistoric peoples chose

claims over corn" - refers to Gulf of M a

"... before [Eur] encounters transformed the human geography of the

Northeast, most aboriginal peoples living along the coast of the

Gulf of Maine lived without maize. A few inhabitants of the

southeastern reaches of the Gulf cultivated maize, but

Next quote - marginal, culturally retarded

Eng. bras against people in woods. No farm, homes. No beasts of

Iroquois have dominated historical & ethnographic since as
most Algonquian disappeared

Iroquois - quintessential Northeast Indians

Alg - dull in comparison to martial & economic accomplishments

Alg - sites called villages & horticultural transformed into
marginal Iroquois

No villages - so confirmation of marginality

NE arch-LJ part of NE by virtue of geology & geography

"We are not receiving messages that successful societies,
successful on their own terms for longer than our own
might sustain."

Separate corn & cultural complexity

Duran - Inapprop. analogy Alg to Iro; belief Alg not for sedentism

Celtwell and Webb - choose not to practice Hort. only varying degree

Ninian 2003 - Over stylized Hort. as couldn't understand mixed model

Bernshein 2006 - continuity; intensive Alg mixing from companions w/ Iroquois & ethno history

Snow 1983 - NE marginal to mainstream of North prehistory

broad spectrum - new resources added

to ever explicitly list

Thousands of grey literature - CRM reports.

Compare late Ancestral - Late Woodland.

Hemispheric - regionally & across time. - similar activity and re-use of site thru time. - successful coastal precontact strategy.

Supports Bernath's hypothesis for long-term continuity.

Certain sites or groups of sites inhabited year-round.

Flexible sedentism = strategy.

Sedentism - part of a continuum of mobility; flexible strategy.

Late - periods of social and technological change - connectivity to other groups, practicing larger economic, expand lithic and storey technologies; confront dynamic ecological setting.

Greater & Sites.

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Duranlew believe Ag necessary for sedentism - long houses + Ag.

Inappropriate analogy to groups like Iroquois - v. diff + >> Ag

Fluah = flexible mobility - residual mobility - Sedw is one response when resources are available.

hort corvids - aggregation, sedentism.


No-choice agency not "natural state"
Break apart evolution maize + cultural complexity.

"domesticated plants in coastal southeast NE, with few exceptions were not a significant part of prehistoric diets" - Keenan 1997.

"intensive maize horticulture was not practiced in the coast until th Contact period or just before" - Chilton 1999.

"maize was not a central feature of the coastal economy" - Brown 1999.

Brad spectrum subcategory

Different adaption of maize - knowledge + some use

widely native botanical materials, momentums birds, shell fish etc.

Maize - sedentary - not - 18th 19th - clue to interactions w/ Eur.

Seed economy - large storage/stock pile; large pottery vessels - storage, burials nearby, gy-room food evidence, enviro rich zones, sites affect on protection - not new large houses.

from climate - not people.

Cantwell & Webb - not sufficiently impressed w/ vibe of Az

chose not to practice it, some adopted to varying degree.

Ninian 2008 - practices were liminal - possessed characteristics of both cult + foreign - ever stylized 0s couldn't capture this life style - mon ordered + managed than were - to it western nichotomies - acts for lack of evidence.
groups of alike - e.g. Squid, octopus - form larger habitat areas - extended village communities. Herdster + Chevry 2001.

Dr Round - Outer Cape (McManamon 1988), BI (Treskov 1999).

Bradson: conditionally sedentary forager - argues for estuaries.


Sedew - not threshold event, unilinear, not incompatible WJ Forging.

Many assumed main immediately effective + highly productive + allowed for sociopolitical complexity.

Flexible Sedanum - lived in scattered or group of camps for most of year; protected locations; access to wide fauna, botanical, aquatic resources, broad range activities 3000 yrs.

LA: stability + consilient seas level + enviro - ameliorate. 1: veg; 2: sea level + fauna; ground-stone tools 1: trade network; interpenetration conflicts 4: 500 m wide marine + terra. resource estuaries

Drastic marine not on large scale - coast floods of mosaic habitats.

Ritchie - forest-adapted bush setting - familiar with resources.

Shift up and down on coast.

V: few inland sites > 500 m Wide.

Many coastal W/10 200 m.
Hornblower II - rugged moraineal uplands; small, S-facing amphitheater, few feet above Pea, 'surrounded on north, west and east sides by what would have been heavily forested hillyland that provided shelter from the northwesterly winds.'

Strata - presumably compared to times when pond open to sea.

Shellfish + horne or aluwh


Indian Neck Ossuary - CC - all ages + sexes - reflect pop's remarkably healthy pop'n 'little evidence of disease-related pathology and no unusual evidence of trauma,' low incidence caries, high freq dental chippy - not ground cereal

Hornblower, Vineuil Site - Lagoon Pea, Tom's Neck, Hel of Lagoon Harring Creek, Guernsey - permanent village, M/W + Nahu

Squid Ridge 1st Ch 2001 - 4 sites c. occupied village community

Few cliffs around over time

Site re-use = territoriality - increasing distinct in C/W
Short-term sites; remarkable continuity - stable human adaptation over 1000s of years on SWE + NY Coast

Most sedentary hence expect in LI, less in LW

13 categories of activity - lithic tool repair, hunting, lithic workshop, fishing, shellfish gathering, plant gathering, food processing, cooking, storage, disposal, short, burial, ceremonial

LI + LW perform the same with same raw of activities, demonstrated continuity thru time in subsistence strategies

Chuncheon + wild barley - 2000 years of food - shorter closer birth spacing 1 popn

Some vegetation - more plants on LI Sound,

MV, ACK, BI - more fish NY + Narr - more shells

territorial or homeland by LA

Overall homogeneity - reason + time + re-use Bernash

Successful pre-contact strategy

Little evidence - short tools, no ? sedentism W/ maize

Designations: LA + LW no longer useful modern in habit strategy - use chronology.

Periods (precontact, protohistoric, early historic) - has effect of introducing discontinuities where don't exist.

Double-trig wall palisades - "hostilities were a fact of life for Iroquois in the Northeast, and much of Iroquois culture is comprehensible as a response to these conditions."

At contact
C NY - nations separated by 20-50 mi. - no time depth - snapshot of Iroquois development
At one pt in tim - 200 yrs earlier pop'n distrib., pol'tics, ethnic,

Linguistic groups difficult
Iroquois - 5 Nations - Seneca, Cayuga, Oneida, Onondaga, Mohawk
Iroquois - incl Huron, Neutral = Susquehannock - spoke Iroq. lang

Hostilities precede maize farming - "spirituality warfare are deeply rooted in the culture of northeastern North America and are key to understanding Iroq.

Cultural development."

"the forests and fishing spots of ancient North America were not safe places"
Not clear who bow + arrow introduced - no preserved wooden parts - AD 600

Forest ecology altered by humans - White + Cushing 1988, White 1984

"How wide-spread and frequent human use set forest first went in the Northeast remaining uncertain" but he plays them up

"Deer were the most (me) source of meat in the chief - antelope predominant, mammalian remains on Iroquois sites"

Pigeon - major resource - underrepresented in archaeal sites.
Hort = stick
A_ = flow

Dirt bark cane

Nuts processed by crushing + thrown into boiling water - most foil stripped off
Nuts stored - hidden most imp. also walnut, beech, chestnut acorns

Balance of Nature

The three from sky: corn, squash, beans = maize, beans, squash
Adoption a gradual process - farming never replaced hunt, fish, gather
Ontario - maize alone Crawford R 6th C A.D
Ny residue - slightly late

Owasco - 900/1000 - 1350 A.D - 2 types maize
longrightarrow 10-17 varieties by 1300 A.D maize, beans, pumpkin, squash, gourd, sunflower, tobacco
AD 900 curiosity + maize w/ little bush, changed, sunflower - squash R

Spread Medical Warm Perx

Isotopes - considerable maize in Owasco 1000-1200 Tel utel cam
as f CHOs heavier went w/ less decay before
Andropogon - mold resistant properties

Bean - last to be cultivated + AD 1000 in East + 1300 AD Rowland
long after intro of maize

Hasenstab - little or Graham evidence that old field regularly burned one
also questions on follow + abandon
by not burning, retain N
Village site - preferable for soils suitable for cult. more or sandy how high in limy T0 + cold air drains

Oxusco - fortified villages appear

WS mainly + food storage - accidents lift + formation of shelved + longhouse

Now cleared fields, built longhouse + pellisoids - extra time due to bow + arrow + & producing in hort^?

↑ seismic ↑ for portions of pop'n - f, childless, old p.

Warfare - reduced & mobilility

Warfare not explained by food resource

Stilabons - multiple arrow = overkill?

Stilabons + Nautical C?

Post molds 5-10 cm diam / Covered w/ bark - cedar, elm

Hunt 2000 - large longhouse in 12^th C only

up to 400' long 15-22' wide - baric layered over vertical post

cedar = 2.55 square posts for 74-foot

length varied ws/ family w/ built + stacked

AD 1280 Howlett Hill 3241 (Tuck)

1410 4110' at Schoff

13^th-14^th C ↑ houses as pop'n ↑ & end of 15^th C + 16^th

Some oriented into wind but not fixed

Some double layer w/ mass insulation
Storage - Corn hung length of body
Longhouses built as much to house & store as people
huge horizontal silos filled w/ maize, beans, squash + oth.
Plus storage pits under benches 20m > 3m deep
Corn needed pounded/processed before eaten - boiled wood ash
enhances nutritional value w/ lysine + niacin that can be metabolized

Pots are thin, wide, more efficient cooking family used 4-5 at time each last 6mo-2yr = longhouse
need 18/yr

Typical village - longhouses surrounded by palisades - fire on hilltop
or defensive tower each village dynamic, hiatus
Onto palisades, longhouses first in 9th C
NY, 1st in Susquehanna from 1100-1200 AD move to mound
NY + ont communities grew over time w/ mon hilltop as group center
clans 100-200 people in 3 houses
16th C - 2-10 ac sites up to 2000 people - nucleation of small communities into few core villages
"the primary motivation for construction of these houses is believed to lie in the desire for increased security"
2000 = upper size limit for village (Snow - one of 300)

Soil - key to area location; defensible behind w/ some elevation
by larger hill; defensive corridor w/in villages by presence of brook
Corn cribs adjoining long houses

6 families - 32' bushels of shelled corn for year - maybe an overestimate by Conrad Heidwich but in summer
4 bins - 8' high x 4' deep

3 rows of palisade posts - common - 1 size post molds with time 16th C - up to 1 foot frame early 16th C Carona site - 2' - post cut w/ mlt

Cedar would last 25 yrs
4-10m tall

Fighting platforms between wells, watch towers

1 perimeter by 2x1 area by 4

earth piled around 2m palisade boxes

large midds just outside palisade

Clearings 1 w/ time - firwood collection + burns

Villages last 10-12 yrs 20-50 yrs in 16th C 15 yrs - 17th C moved 2-4 miles - ralud pop

Computer modeling - communities up to 200 people could remain indefinitely in 1 plot w/ earthworks

but wood, replace structures, farm

Some sites of lower fertility chosen but w/ better water not resource maximized
No evidence known.

"Large villages spaced out like islands of population in an otherwise sparsely settled landscape."

Owasco - in small hamlets 2 - mounds or?

Rich as soils of Genesee Valley abandoned by mid-15th - presumably due to warfare - large policed villages on hills & F

Wy'coff - about 1380 AD led to some major pop. shift?

AD 1600 Mohawk pop. 8,110-10,830

Owasco + ears Iro. 91-98% fawn remains deer

1400-1566: 62-82% f deer or 1 time on warfar

plus clust. & deer in our

Haudenosaunee - People of Longhouse or The Whole House

roots of league - pre-doh control - probably for mutual defense a generation before Eur.

Trade - marine shells before Eur

1525: Eur soon - iron axes, iron spikes, copper blades from both

1580: glass beads important commodities by w o 16th

1-2 generation before met NY Iro saw Eur
Eur. trade - via St. Lawrence - but also via Susquehanna from mid-Atlantic coast inc 16th C marines c1614 Fort Nassau estab - Dutch trade post
1624 Fort Orange FN destroyed by floods 1617

Trails 1/0

Corn - portable for hunting, trade

Birch bark canoes - from Can - common in NY by 18th C
Elm bark canoes - up to 80 people

1/2 C between Eur. goods + actual written contact, no silent discovery

w/o Eur. goods, "Van den Bogaert was the first to
leave a written account of these Iroquois. His journal provides important details, including the abundance of meat books in their
nation."

on STL French allies to Huron - Champlain + Huron attacked Iro Vilx 1665
Huron centre at Fort 1649-50

Wampum: "the money which circul the beaver out of the interior
forests" Wroth 1684

5 Nations n20,000 before contact by 1645-50
In 1634, Van den Bogert observed interior longhouses made of split planks with iron hinges.

"Archaeology can never inform us on one thought to pass down in legend form."

1st career forest ecology
Born Albany VT; lived in Barre, VT Forest Service after HS -> NY St Coll forestry. Spruce MS -> Soil building in plantations
NEast Exp station; Bar Harbor, NH -> CT
Waterman - Soil microbiology -> Rutgers instructor
Soils & earthworms -> PhD + minor

Dartmouth - Res Assoc anthro
Paper on Eng - Indian contacts 1962

Dartmouth & St Francis Indians - Quebec

Ethnohistory 9: 24-40.
University of Alabama Press, Tuscaloosa.

Retrieval - under excavation of archaeological materials.

Marble Bluff, Arkansas.
Regrowth - A. trifida candidate for food availability. Late W. Ozarks
Semi-commensal plants - dependence, managed. Store food like winter and early springs.

63-75. C. W. Lowam. Evolutionary changes associated with the domestication of
Cucurbita pepo. Evidence from Eastern Kentucky.
Carbonization - how most archaeological preserved - lignified cell structure best
Wild cucurbit greens - on floodplain, structure and similar seeds to T
Nuts - key resource - collect full set late winter; much inter 100, variation
Other plants - chenopods, squash etc. even out periods of low must P
Bark - plant cuticle in focus
Sprouts visit to plant garden, late and harvested in fall
Cult = insurance policy relative to nut P

Anthropogenesis - impact environment - critical factor in the success of naked
No longer linear progression
Weeds, grass etc. but no evidence of scale of impacts

Over
Spread risk, diversify options.

161- P.B. Gardner, "The ecological structure and behavioral implications of mass exploitation strategies."

USDA - daily energy - 12 oz dry hickory meal, 15 oz corn, 20 oz maize.

Hickory more fat - fewer calories; important for India; hi - good source of starch, acorns less so, maize.

7 hickory trees - perfect for your
Germillion  -2-
Gardener article re mast
10 km radius: 4 mill lbs acorns 1/2 mill 1bs hickey
Remove shell + for acorns leach tannic tannic acids
2 hrs soaking 4 hrs leaching 1/2 hr cook 
Variation mast annually - graphics
More than 1 spp buffer thin trees 1 P
Imp stored commodity for 1st winter + sympt
Competition with animals so pick quickly
Parish on hot stones to f g. - stir over heat slow
1 x1 m pit 22 bu hickey 40 lbs/bu 75% edible = 300/acid

Red oak
White oak
2200 tec for 22 no.

Easy to transport
Poppin aggregation + resistant perennia
Strategies - crush + pick crush + boil strong + spay
Use hick nut Mitchell Arboretum climate A hickory
Use P + most failures
End of Years - what happened most failures failure
All ows

Hickory - not fire adapted - so manage otherwise

... gradual cultural development or evolution. Small migrating bands H-G to Ag societies, tribes, towns, temples.

2 cultural elements - Hopewellian + Mississippian.

Ear Rock City, N. Gulf - no major movements to report. Cult exchange.

To Hap SA by 11000 BP.

Shows Paleo-SA-MA-WW- - FS1 Mus Archeo 0 Mls.

FS - period of initial cultural A + adaptation to food + industrial resource of post-glacial enviro. 20% of available tree plants used.

Knowledge took a long time to develop.

MA - ground + polished tool.

LA - Coped pop'n, regional ad. + tools, 1 interregional exchange raw materials.

NY - *4 grain stones - post 1 acon + nuts.

EW - wood/leaf pottery, burial mounds + Ag.

Map: Mississippian - olera.

Hopewellian + related MW sites - shown LI, cuts off NE.

MW - most of ENA - Hopewellian - complex burial mounds, earthworks.

NC > NE > MN - Hunt = Comfort. "did not see participation in the Miss.

Cultural advances and are regarded as LW groups up to the time of EC.

"They did, however, have their own cultural developments. They had not seen of the culture we think of the late 1985. NY + Sonts ad. H. Sioux Groups in MW etc. Material.

"The details of the cultural development in ENA are unique, but the second trend may be regarded as a common one in the 1980s."

Giovanni Caboto - Italian, English employer

Verrazano - 1st known account of direct contact

Archaeologists originally believed there was little interaction to contact

Indians moved from scattered settlements into more compact + occasional fortified towns

Storage pits Fort Hill - deer, bear, dog bones, nuts, dried berries + corn - could have held 3200-4000 bushels corn

Squanto - bilingual intermediary English / Massasoit Wampanoag 1621, credited as 1st English Pilgrim to Plymouth in first year - men made fields + fish - may have picked up from Eny in NFD / Dec 1993

CC - McMaino - distribution of sites corresponds to dispersed pattern of individual wigwams + corn fields Champion 1635

N Salt Pk, Coast Guard Rd, S Salt Pk

Tuck - Onondaga - larger than longhouses 1200-200
Smith family tradition - village on the George Smith farm, E of buildings
claim 400 wigwams
large burying ground to the NE E of S end of Lagoon, graveled in
brush & huge middens of shell fish
on W side of Lagoon these are undisturbed.
Site of village has now been under farm culture. 22 acres
many arrowheads & pottery

Site is natural for Indian village - near great spring "Wehatagan", which
now supplies water for 10,000; edge of lagoon
To the N were dense woods Ogkeshkuppi
To the SW is level fertile land running down to Duarte's Pond,
still a farming region
may have been largest village on island

1674.
Daniel Gookin. Historical Collections of the Indians in New England

Smith Farm: history worked out - part of Thomas Dassett held here in
New Purchase, divided 1678. Passed to Joseph Norton - son Josiah -
part be of his 6 sons - Joseph Norton the farm - John Smith
Itaklyt  Principal Navigations


Born 1567 - Spanish service as captain to Mexico, Havana
Cartagena - 1599-1601 wrote up

Sinh Cartier - series of voyages from France to NfW, Gulf St L
Fish + fur Normandy, Brittany + W Sw France to America
for cod

1572 Anthony Pavault > 100 Spanish ships - Cod off NfW
20-30 for which from Biarw, Pariqul - 50
France

"Des Sauvages; ou Voyage, de Samuel Champlain, de Brouage,
facile en la France Nouvelle, l'an mil six cents trois
w/ maps

1604 - site chosen by de Monts - St Croix - largely Champlin's insulator
Deep for colony but de Lusignan

Started settlement on St Helen isle not Montreal adjacent

1604-07 outlines quest for N route to China - 1496 John Cabot
+ son Sebastian, Gaspé Cartier

Cartier 1534-35

Jean Grose de Saligny 1542 from Fr - Labrador

Gillies

Henry Grose

Island of Saint Croix - named by Sieur de Monts - 20 as head for flax
describes MA Indians cutting down trees with stone hatchet but having some small fur exchange with Le Cadre Indians for furs

Nauset Harbor: sailor went to get water - Indians took metal hatchet from him - Indians ran away & jumped from Champ's Bargu. Indians want to soldier - shot arrow & then killed him. Champ's people shot & killed him. First white man buried on NE soil

Great fisheries; bartered everything of value for pine, button

At Chousacqt traded w/ Chief Marchin - presents for Etchemin bay

Gloastor - Indians killed many left on shore

Slaughtered Indians at Etchemet Nauset Inds.

Canseau Harbor "Fishing, both green and eel, is carried on here"

Cape Breton: 1521 Port tried to settle - spent one winter

St. L. may Indians traffic in furs

Has a figure of a polarized valley
Guernsey, S.J. Notes on explorations on Martha's Vineyard.

Aug 1912-1913 From Menemsha Creek to G-Head out focus 6 W of Menem Rd. Barrie Re-Squamescat & Lucy Vineut - LY to who 1 ml of GH Light; Lahakerville to Brineyard; Waschob & Oyster Rd W Tis Masset const. colony at Edgartown 1642 (Ear familys since 1618) ~ 2000 Ind.
Ind 1674-1500 1817 - wigwams still at GH

S Shore - Cliff Wood Chilmark Pd ~ 20' high. Pit 4'W' deep 2'Ly wide
- perpendicular - filled - scallop shells, bottom coarse charcoal, fish, bird + mammal bones in W/BW + above charcoal saw bone dug on foot bones if bluff (chips only)
Nothing on shore from there to Squib Bluff - grave described but area dug out
Nothing on sound side from Menemsha Creek to Brineyard
Brineyard - quartzite chips

S Shore Menemsha + Nashaquites Pds ~ almost uninterrupted evidence of aboriginal occupation - spots where soil almost black W/delaying ab smk
One on Vineut Farm black soil to ~ 1 ft
W Shore - ancient cornfield 50 hills W/Hills rows retain shape
- black soil W/Skulls + bone splinters
Sinks, soapstone pot, ceramics

2 house rings 17' diam ridge at earth 2' wide 6'-7' tall. brick front
1650 Younger Mayhem house - made with small poles, like an arbor covered with mats, and their fire in the midst, on which they leave a place for smokel to go out at

Pease's Pt - 2 graves 50' from shore - 1 - double grave - old adult
in recline position knees drawn to chest, hands against jaw; adolescent same position. Both right side, face south
3 pits + hearth shells, mammals sim to other pit
7 pits - fur, bird, fish Pits in sandy soil, shaded by fresh grass
above - retain moisture

Pits & sherds

Note: suits- near brook [hearth + pits] - bones - clog, deer, turtle, bird, fish

House sink on terrace

In all only 1 fragment of Euro pottery no other white artifacts.

Oyster Pit - shells has small pop'n of Oysters; brushy & not cultivated so couldn't check well.

Unfinished Indian canal connecting Oyster + Watcho - tradition both once connected to sea before storms closed & trench 20' x 6-10' deep ~ 400'

"The amount of industry required for this undertaking is much greater than we are accustomed to ascribe to NE Indians..."

Historical description of oyster passion to sea, allowing fish to harbor thru bl做一个 to spear

House Plaza w/ shell mounds 19' diam x 2-6' sculp, gaging, clam, seashell

One deposit near Austin Pit (?), 100' x 2-4' oysters

GH: large shell bed - 15 acres 6-10' below

3 other burials - cemetery small field above - irregular - looks like forest

2 small cemeteries near Brickyad - also burial site

some Christian expect most an mind above + His

GH: supposed to be many single graves - supposedly them around to ward off spirits

J. P. Hart  Introduction

1980s - 1st description of our maize agricultural system

then its connection to maize adoption - drove palynobotany

with little from northeast "fleltation revolution"

most emphasis on maize or lack of

Indigenous (not domesticated)

Gourd - Cucurbita pepo - NE 5695 BP  PA - 5400 BP

No indigenous domesticated taxa yet in Northeast

Wild Chopped NE - 4400-5400 BP

Maize - S Ontario 1570 BP

Smith 1992 - maize-based Ag expanded over large parts NW North - 1100 BP

Northeast - adopted crops indigenous to riverine forests

G - any indig. plants domesticated in Northeast?

Beets -AMS dates 700 BP - NY

Maize - recovery requires much work - cannot assume earliest dates for

maize reflect the timing of its adoption - unless abana firmly documented

Frances E. King. Changing Euro-American Historic Plant Use in Pennsylvania

1000-1200 AD - rel. warm & dry due to 1 enhanced westerly flow

1250-1300 AD - cooled 1°, less frost-free; competetion for sites

Beans + popin. warfurn. members of Eastern Ag complex

Maize - risk - mobility, Ag mobility + inbreed but less risk opposed

Ohio 100-800 AD - Squash, oily seeded, sunflower, sunflower, sunflower, starchy seeded

Chenopod, mesapines, knotweed, little be"
Ohio - Wymer

Maize - EW AD 425; LW - maize, 6 nuts, sunflower

Rg specialization - emaha on maize

mid - Ohio - beans, squash on maize after 1000AD + squash, beans, sunflower seeds

Tobacco + little Ear Comp can be masses of maize, bean, squash

WRY - Monongahela (Peshtigo)

Post AD 1000 - isotope maize reliance 70% 1050; 80% 1225

health problems - caunza - other endemic pathologies defwine site; corn grow below

May Pallizaded upland sites far from large E valye - but all use corn

Large storage facilities attached to house - petal structure

Lots of maize material - cobs etc.; bottu gourd; from large to site

Small amz nuts - acorn, butternut, hick, bl walnut, hazl

Hickory - concentrated - peach, heat in water, stem nuts + oil

cos C. ovale as small nut

CPA - Late Prehis site; most large subterr storage; consistent maize remains; beans; domestic chenopod; sunflower

Summery - Squash from LA/EW; maize, beans + EAC - LW/Early Prehis

Maize imp crop aft 900/1000 AD CPA + beans, squash, tobacco +

FAC used Maize consume aft 1000 AD; introductin ~ 1250 AD

Maize possibly iniitally as sacred item

Prob lye processes

Q of storg w/ climat after 980-1200 Peak

Dr. Fawcett; Dr. Webster; New Sao -
SC NY - Nice outline of longhouse 30' x 100' w/ 100' pits
may previously excavated by amateur
Ritchie excavated - underplayed subsequent material - ascribed to
corn & beans
MID 3rd c. BC not 9th 830 BP main (other sites > 1000 BP)
Beans 400 yrs after maize

T.B. Larney, L. Lavin, M.E. Mozzi, and J. Ferguson. Cornbeads and
buttercups: Plant remains from the Goldbelt Site

If burn cob of corn - charred kernels remain but cob burns up
in ashes -获得更多 kernels than cob remains
Maize - seems more abundant than actual recovery - found
in post molds etc. - shuck cobs + transport kernels

Long
House Outline - 13m x 5m Maize date - 240 BP
PH 6.4-7.7
1448 - 1631 AD
1425 - 1648 AD

Insects - generally no preserve in archeologic sites - so they + uncharred
charred remains may indicate bioturbations

Nutsheils - may be animals - but large quantities - assumed cultural
Crack - boil - still used - shells to bottom, meat + oil rise
Oil - hair alone or mixed w/ beans grease

Roundtop - old date AD 1090 - now ~1200 AD - Hart

But Ontario, PA, + Hudson Valley - maize ~1200 AD - overall exposure of Neech Indians to E expansion of maize for the past 1000 AD period

Pipeline ENY + SW CT ~ 375 mi. - lower Housatonic; near LI Sound -

Milford CT - Wood + Maize 1240-1280 + 1500

Columbia Co., NY: Wood + Maize AD 900 + 1150 AD - Maize - Present before 1000 AD

...may have small granary, aboveground or subterranean area

Maize not common in E Woodlands until ca AD 800 - Smith - Seemingly widespread appearance of maize in archaeological record of Midland and Southern of AD 800-900" "Agricultural economy dominated by corn had been established over a broad area of the eastern United States by AD 1150" B. Smith 1972 Prehistoric Plant Husbandry in Eastern NA

Ca AD 800 expansion of maize reaches well into Neech close to limits of climatic suitability

List of maize dates - many Breuermer + Dower - many AD 1000
10 of 14 dates from NE older than 1500 AD

Hart suggests native plant cult w/ maize at 1AD

Neech - not part of Mississippian route - some based on maize dominated AS
Subsistence - substantial focus on hungry fur animals, migratory fowl, fish, shellfish, collecting & gather wild plants

Maize more common at Late Woodland - Housatonic site 18 of 79 features had maize - small area

"For long stretches of the coastline, maize horticulture may not have been, in fact, a particularly visible subsistence strategy.

"Strengths versus attempts - maize hurt introduced to Neat by Middie Woodland

But maize cult. in Susi & Hudson drainages, beginning Late Woodland - that correlates w/ widespread appearance of maize

Divide Mid & Late Woodland n AD 800-900 -

Due to 'fletcher' - but >100 likers of Hill to get 1 maize fragment

D. J. Bernstein. Prehistoric use of plant foods on Long Island and Block Island Sounds. p 101-119

Doesn't include nuts/seed - ac, bre, seen to see large, rel. to seeds

No native cultivars; overwhelming non-cultivated spp found

e.g. Chenopod - common but don't appear cultivated as in Middled

LI - 8 prehent sites - charnel plants 7 or N or more

Most sites - few plants even when fleeted

Thomas - interrelated base - hub of Woodland ecosystem

Punke la - Funct & Pfeiffer extensive recent work - 27 prehent sites

prior to LW v. small <400m² 5295 BP 2; larger v. now LW

BI - few botanical remains so far - hickory
Did coastal Algonquins raise + consume maize in large quantities before 1524 AD - initial Eur arrival - general date. No based on arch. evidence.

Marginal at local level - Com - most found in post contact.
5 Fisher island sites - maize + hickory nuts - no direct date.

At all maize sites - much other material - wild plants dominant

Hickory 40/52 oak 18/52 Juglans 8/52 Cornus 7/52 Chest 0/52

Beginning w/ Late Archaic - a few plant foods were very imp - including:

cap - hickory, acorn + Chenopod w/ others lesser

Nuts - cap hickory - most widely distributed 47/54 sites

Specialized feature for processing + storing nuts

Chesnut - not at any sites (thick shell - Brendelmer 1995)

Chenopod - may have been most imp seed spp

- evidence - large scale collection, processing + storage of chenopod at interior riverine sites - not yet clear.

Decades assumed that after AD 1000 - active tropical cultivars

Long histan clear but relative lack of evidence

Maize archaeology:

Maize was grown - not control. Possibly symbiotic
even after maize - broad spectrum +

So

Millenia - relatively stable coastal economies - diversification of resources - long-settled patterns - not interrupted by W developments.

Midcontinent: *chenopod domesticated before maize + beans*

- morph changes vs weedy
  - ↑ leaf thickness, ↑ seed volume,
  - smooth leaf surface → from weedy
  - before 2000 BP

No similar changes in NE None E of Appalachians

*Chenopod* was imp for subsistence 3000 BP →

was associated from earliest w/ storage facilities +

semi-perm occupation; some morph like domesticated

But don’t claim domesticated too much uncertain

*Chenopod* CT use assoc w/ ↑ duration + intwntl. residwntl. occupation

Ancient environment created by numerous recoplts ↳

Favor. ↑ to *Chenopod* created + maintained

floodplain hypoth for domestication: Smith

J.C. Brendremer. *Changing strategies in the pre- and post-contact subsistence systems of southern New England: archaeological and ethnohistorical evidence* p. 132-155

Maize hort - arrived NE ~1000 AD begin of LW

McBride & Dewar 1987 - LW - *return increase social + tech. community*

- ↑ trade
  - ↑ Seculwhsm, ↑ trade complex, ↑ immrgrtn, ↑ ceramic tech, ↑ non-local
  - 1 lithics + adopt maize
But maize, bean, squash - non-event so little obvious change (McB + Deems)

LW food prod - broad-based hunt + gathering subsistence system emphasizes
moiety + estuary resources

Lavin - more imp inland as less abused resources - lean months + storage

Argues for regional vaqueros - CTR maize - 316 hori by 14th C AD

Subterranean - maize, beans, eg - not nec stop or major
of caloric uptake - but substantial investme in maize
So suggests regional complians

Beans + squash - only at a few sites in NE

Domest sunflower - conexp, a bean - undoc in ethnolitice NE

Argues - maize conc. in CTR sites - coastal marginal + poss. even
 traded + large sedent villages - estuaries + hotel modes

Fish + shellfish - predictable, low-risk resource, available all year except
when estuaries fruit - caloric import diluted

Nice discussion SpC + strategies

Hunting - did dear most abundant

Exploit nuts + fur animals imp

Coast + upland - no evid maize imp. - large non-hort sedent villages
of foragers on coast = lower C R V

Farmsteads of effort record my how implau warm with semi-perm
villages
Coast - rich marine & fishing resources - capital of sustaining
rel. large perm villages - despite unprod, soil
Inland - maize as fewer resources, better soils

Tested mobility, forager horticulturalists, condition sedentism,
mobile farms

Early Contact - maize imp - Ver 1524
McBride & Bellantoni, 1982 - Changes independent of Eur contact

Cont - pre-contact settled, subsistence & foraging societies, post-contact political &

social systems, etc. too much continuous LW inolo.

Nipmuck - Nenah Hills; Pequots + Mohegan - E coastal zone + low CRV
Peeluck, Wamocks, etc. mid CRV, Nanene, E Block

Larger policed Peg & Moheg - after contact, + CRV, Narragansett, 

BJ hunt, gather + intrusive maize

↑ warfare, territoriality, pop'n

Maize became intrusive here in fort villages

Has Pynchon calendar

Coast - large sedent. villages sustained b
Lavin & Brezda argue for CRV maize.

E.S. Chilton. Mobile farmers of pre-contact Southern New England: The archaeological and ethnohistoric evidence. p. 157-176

non-event = intrusive

dichotomous approach (inland vs coast) unlikely

Intensive maize not on coast until or just before contact

Terms - vague - what % calories etc. = staple?

240 kernels/cob 1500 (max) = 6

Trade of maize - further uncertainty

Pits - may w/ wild plants, found ≠ proof of

Little evidence "planted fields, garden or other site-based stuff"

"Sevenkerti - who accounts of the native NE diet belies claims of maize

Specialization - hunt + gather = corn

Bennet - 1955 maize 65% total diet - but from a time of substantial trade w/ English

Thomas 1970 - heavy maize - based on Puncheon calendar - but by mid 1600s - substantial transformation by Eng, Dutch, Fr + other nations

Cronon - 2-3 mos. dispersal = mobiliform

Cites WE on most of landscape

Lower CRV - big warmer

No evidence for settled village life in interior NE; also LI (Scriba)

Coastal Mass - Loddeke 1988
Invisibilit of villages may be due to high degree mobility

No large permanent settlements. Dispersal within a homeland
high degree of individual - community dispersion - mobility
Mobility - strategy to maintain envirom diversity and sociopolitical
fluidity that is dispersed.

Wigwam - small 1-2 related families
Moved frequently

Pine Hill - 100 kernels
post molds - small overlapping wigwams - prob seasonal
encampment despite one of largest LW occupation
20 pit features 1 m x 1.5 m deep - not red
1 W/maize 1442-1518 AD
maize rolu unburnt

Ceramics - support diverse diet + no maize specialization
then also more diverse than laqueus - highly mobil
WS fluid social boundaries - much of maize location

dietary supplement
Need hypoth blue - maize

Subsistence - kaleidoscope mosaic

Most dramatic at 4700 yrs hemlock beech-rich N. Thawed first created more productive habitat for upland game important to natives.

↓ hemlock ↓ beech, small oak, pine

Multi-track ↓ hemlock before - 6400, 6000 w pine + ↓ fire
↑ spruce N 2000

↑ use of beaver 5000-300 - food, fat + pelts

Changes in wetlands + ↑ N. Thawed associated with changes - people

had increased benefit beaver + deer

N. Asch-Erdell. Prehistoric plant use in Maine: Paleoindian to contact period. p 191-223

Looks closely at veg history + nut trees

Bennett 1980- ethnographic look at food economy - SE held all w/ saw

w/ maize 65% calories, fish/gam 20%, ME- no maize Epi: kennewick

so gradient through

Butternut = Ginkgo - 64% fat + 25% protein red oak 22%/6%

Mod. Archaic - acorn most w/ jujube

butternut, acorn, beech, hazel w/o
Cites Cronon. SWE burned 1-2 per year "extensive areas of forest" to keep potentially thinned canopy = grass, herb, shrub. N app = beech, hem. SM, RM

N less as relied on canoe + N app less adapted to fire i.e. spp found!

"wood analysis... lends support to Cronon's account."

Early Prehistoric Period AD 700-1300


SNE - People explain lack of village sites - destroyed by development or burial deep in floodplains.

Beans - archaeologically visible AD 1200

Large multi-family longhouses, SE NY - only 13th CE AD

Cultural Research Mat. - Unewus site in lower Oswego, etc.

Sidell, N. A. Paleobotanical indicators of subsistence and settlement change in the northeast, pp. 241-263. [v, peculiar]

"Curriculum of anthropogenesis"

anthropogenesis - effect of human activity on vegetation - addressed

Yarnell 1974 - landmark study - Indus raw silk on distribution, habitats, plants

variations - plants in Great Lakes - used 20% of flora

Minor 1976 - wood charcoal + seeds - important as reli. measure of veg. disturbance

Model - 1) clear pristine veg 2) less diverse ecosystem of cult. fields must be maintained 3) abandoned + successional stage establ.!

↑ Ag ↑ weeds

Yarnell 1984 - Food plants grouped by kritic comm: 1) open deciduous

2) shrubs + thistles 3) open woods 4) mature forests

ENA - unthinned veg describes "original forest pattern" Braun 50

1) nut spp only 2) widely spread - beach red oak, hazel

Group trees into plant communities/habitats - dry open woods, disturbed woods/thickets, bottomland forest
Mosaic forest - NHd - Hem - WP - SM - Br + Ham; rich soil, sand loam.

YB, BB, WP, Osage, Hornbeam

Drip open woods - O, Hi, Chest - five tolerant sp's only, SM

Disturbed woods + thickets - clear cut before fire - Pin Cherry, Choke Cherry, Black Cherry, Hawthorn, Poplar, Sassa, PPine (birch?)

Floodplain / bottom - Ash, elm, butternut, ced, will.

Need flotation for charcoal - nature of surrounding veg

Regional diff in wood charcoal corr. to regional diff veg

evidence

"both wood charcoal and food remains that human activities may have altered the natural vegetation of the area through time"

- overhead non-productiv spp. - 1 nut P.

Gardner 1997 - possible nest for nut trees - most exploitation

Nutshell clearing - use of nuts related b available spp - 0% out that

Wood charcoal + nuts related "rough corr"

But may sites - little nutshell recovery

Core adoption at marr = 4 seeds/gm charcoal

Ambrosia trifida, Polygonum scard., Plant's - Amphiocarpa, Chenopod mollis. Desmodium, Helianthus, Elymus, tobacco, Hordeum pusillum, Solanum americanum

Grass seed from pit lining, met. making, fire starting

Do weeds + situv used plants indicate openings for prob. with Ay - think +

weeds + nuts = open woodland

Beesin - seldom found at archaic sites

PP in botvnum - indicates fire
AD 1000-1300 extensive adoption of subsistence farming, maize-beans-squash hort - big event for most North. Quickly brought some of largest changes to affect indig soc.
Predicted for contact - most cases
Non-event & continuous of NW patterns -> LW with little consequence of cult crop adoption - run couch to anthrohub

Leptopes - E. gigantea - (4)  Lobater

Full blown regional transformation - sedentary sedentism based on hort vs continuity of mobile hort-ag

Hort, tech transform, social aggregation, increased sedentism

Champlain - Cap, Cow

St-W Men unequivocally horticulturists before 1500s, 1600s

Most profound changes to ever occur among Natives in NL

Northeast prior to the arrival of Europeans were those related to the local arrival of maize-beans-squash hort

Transform sociality, subsistence & affair, crop store
Chilton, E. S. "Towns they have none": Divergent subsistence and settlement strategies in Native New England.
pp 289-302.

Black, D. W. Out of the blue and into the black: The Middle-Late Maritime Woodland transition in the Quadd Region, New Brunswick, Canada.
pp 201-320.

Importance of climatic + enviro. change - imp but too evolved to precipitate abrupt cultural reconfig.

"In the future may be pose to live climate & to cult + archaeology"

Long distance exchange with people - Labrador + Nfld to NNE

Coast - tough climate for corn - even today

pp 345-358.

Cons of people in settlent - one stratagy to ensure enough hands + ability to handle all tasks as needed. "b or a = nucleation."

Maize - W. Lab Ear freq 750-1000 AD no nucleated villages by 1300

Soil - common 900-1200 AD nuc. vill by 8th c, longhouse 13th.

Ohio River Basin - line by 850-900 but vanish among pop'n - 1150-1220

Lower Upper Ohio - Fri. 1000 AD + nuc vill 1000-1200

Susq R 1245-1280 imp; hamlet by 720; nuc. fort 1250
NE - Oldest main 1100 BP - lower Hved R
Lower CTR 1060 BP Skidde Is
Coastal 825 BP Hybrid Site CT
Freq - 12th C AD large arrays some sites 15-16th C
No nucleated villages until very late prehistory or Euro contact
Upper CTR 850 BP - most in or after 14th C

W → E + S → N apparent trend in earliest main
W By Swag 775 AD 890 - lower Upper Ohio R
1000 - Upper Swag 900 – S NE
1200 - NE 1350 - MF

Nucleated village - not in main zones until well after visible main. More imp in diet?

> 5300 l/2ns of soil from middle - flotation → 19 main

Bean deal project 51 direct AMS data
Not arch visible across northern before late 13th C
250 yrs before maize - beans - squash absent by Eur explorers

AMS - complete and dated history of beans + interp
of maize-bean squash interp
Wood fibers suggested available by 100

3 Sisters oligon: 500 BP
2 crops originated elsewhere

Charred deposits on 1 shovel = phytoliths

Maize in NY 2300 BP
Squash 2000
So both much older + longer before mainstays - no immediate transformation in diet - just simply incorp into existing diet

Beans - no photo yet 700 BP VT->IL so 1700-2300 yr Sth

3 sisters not a group until ~ 1300

Simple progression H-F-G -> A's not tribal

See that WPine, meat + Corn-Sorghum in same pot
May have secked pot

Coiled → pinch pottery changed slowly. Coil peaked around 450 AD diminished to AD 1200 Gradual

Consistent use of evidence - refutes long-held idea of major change in people AD 1000 gradual & adjustment to local social & economic condition

Differences in time 450 AD
PAL Report No. 1106.
Ede 34.69 mi² 27.01 land
Particular attention Chepqu + Katama 18 historic
4000 yr his
Prehistoric sensitive sites - along major wetland margins -
Great Pond, Kat Bg, Senju Pol, Chepqu
Hist NA sensitive sites - Chepqu

EuroAm - Great Harbo + transport corridors

CRN projects

burials Donta et al. 1993 Chepqu C 1999
Ede Gr Bg H+C 1998 Katama Bg H+C in prep.
Oak Bluffs Macpherson et al. 1999

Before - only 1 prehist interior site; likely due to undersampling

MV - more prehist resources than any other section of SNE
Designated Ind lauds - historically set off some areas of Euro-Am development

Chepqu - Peninsular Island

Great Plains - v. well suited to farming + As
Coves + Neck v attractive to Ind - Oyster, Ell-Bk, Poche

Fields - ditch + mound
Gravel operation - center of Katama

MA 25 on MV Felix Neck
LA Many sites ↑ pupn 5 in Edg
EW 18 on MV
MW 3 Edg
LW Agg into large complex villages in Neast. NF model family groups
Hort prob imp w/ shell

Martin Prince 1607 - Stocked Cheppee

NA on Cheppee - Sachemhips Pahkehpunnessoo
Trail - started N shore EGP + OP - connect Cheppee w/ Numpewa, Tatammy + Nachoweakumuch
No Contact Period village sites in Edg.

Edg area - initial Eur sett

4 Sachemships 1641 w/ sett
1st settler: MV - Great Harbor 1646 → Cheppee pav
Katama peripheral - part of Edg Plains
1662 - 1st mention Plain Rd (Katama Rd)
Cheppee - excellent grazing land
1703 - 250 great settle + cows, horses, oxen, sheep
take over in fall, back in spring - Swimming Pool
Chappy meadows? divided by Eng. 1668
occupied by NA into mid 1700s

1670 - One of Nayshew's Progy Towns
1676 Edg. Incorp under NY
Whaling, wind quiet mill
1765 945-1085 + 86 Ind on Chappy

1790s operated as cowh. sec
1809 resident 1830

Dr. Daniel Fisher (1799-1876) N Water St. Oil + candle factor
"largest in world" 1856 - annual prod = 118,000 lbs candle + 13,200 barrels strained refined oil
1855 - 360 men on wharves
Supplied Govt. lighthouse to Civil War
DF = founder & first NY National Bank

1899 - only 7 Inds on Chappy

1659 - Earliest Ind church in Commonwealth
1674 - 60 Ind families 250 Chapp

1891 - Wasque Bluff on Wally mp

Ind forced into N Neck - poorer soils, no forest so harvested peat

1652 - Thos. Dogsett & Wm. Weeks - Whale cutters for the year
1653 evoked that drift whales would be cut out freely, four months at a time, and four at another and so ever whale, beginning at the east end of town
Drift whaling and floundering in 17th and early 18th C.

1738 - offshore whaling commenced on MV - Joe Chase - relocated
   Diamond (sleep) ACK to Edg 20 ac. & wharf, then sawmill
   Classen, John House etc.
   Not as successful or popular as ACK

1775 - 12 vessels, 720 tons; mostly American personnel - captains
   + officers

   One of most successful Peter Penn 1732 b. - W Indies to Edg

Deep Sea Whaling - Golden Days 1820-60
   Appoato (Edg) 1st - 1816 4th Wharf
   1840 - 11 Edg ships & 5 Edg banks & schooners
   Most oil processing - Edg wharf; by early 1800s - replaced
   ACK as port for many vessels

2nd largest industry - general fisheries, preserving products by products
   largest

As whaling & fisheries - save to Boston + NY
   Mattakesett River, herring & oyster - dug crescent Mattakesett B
   to EGP

1920s > 50 boats
19th C saltworks

Pennywise tax industry - also known as "Dark Woods"
Eds - much less tourism than OB or VH
Mataheke Hill Lodge 1872 KF + served by OB rail
Harbor View 1891

1652 roads - S steirly ponds + N - Chappy to
Swge to VH old Ind trail

RR ran 1874-1896 - winter storm damage

27 PretHist 9 Hist

Chappy - not inhabited excepted by professional
Tom's Neck Burial

"cultural deposits have been identified in virtually every portion
of Chappy"

Ed
Gr Pk - too privish

Green Hollow Area - Katama - good archaeo site

Large cleaned

Felix Neck - Cluster of sites NH>LW & overlapped w/ NH
shell middles, trash pits, burials + Major's Cove
Possible burial: Contact Per Vliet
Little Pd - one large site nearby - routine, collected for 
avocational.

Proximit to Dyst Pd should be seen.

MCSF no professional + no avocational

Promot sites can include: village locations, seasonal "bash camps" lithic 
quarries, shellfish harvesting areas + burial grounds. - not visible on art 
hist. - study structure, cellar hole, walls, broom-atorium, household son
Maps - 1776 Deeds; 1831 Dunham; 1845/53 Boyce & Whiting; 1858 Welling, 1866/70 Ind. Lands (Pease & Pease); 1897 & Hodgdon
No Bibliography or Appendices

Reconnaissance Survey, Town of Aquinnah, Technical
Report. PAL Report No. 1238

PAL 210 Lonsdale Ave, Tewksbury

Submitted by MV Commission NA Hist Comm. - Sondra

Tribal Historic Preservation Office - Ag Planning Bd

Wampanoag Tribe of Gay Head/Aquinnah - Prop, archaeology

PAL Staff - Deborah Cox, SC + HT, Jessi Halligan, Rowdy Sardin

Info on file at PAL - temporary curator Edg. HTC 2000

Town-wide surveys - Chilmark, WTIs, Oak Bluffs - Mitch

Town = 2427 ac. 301 ac.
3 CRM surveys on WTCH/A Tribal Trust Land - 32 prehistoric
+ 23 historic arch sites - Glover & McCurdy 1991, 92, Glover 93
10 prehst + 5 hist sites lost 2 yrs - CRM's under author's
of Town Hist + Arch Res Repetition Below

CRM's complement archaeo studies - based on surface finds +
along bluffs + sand banks CRM inferior

Levitas 1980 - archaeologic. Hist record of GH Indian commun

Proprietary Record: GH almost exclusive NA; not incorp until 1830
So no town records but my prima sore

1860-70 Common land + individ. lot surveys Pease + Pease 1870
1893-98 Hodgdon topo plan - individual lot divisions + structure

MVHS Library + Dukes Co Intelligencer @ Amher

Collectors: Jill Boute - MV Museum Curator - Y. Known'said.
1983 - MHC + Carnegie Museum Nit Hat - examined over 10,000 artifacts + identified 24 unknown sites
Souto et al. 1983 - Prehistoric Cultural Resources + Site Location IV
MADUKES www.vineyard.net/vineyard/history - genealogy, heat maps, old photos

WTGH/A reseach great info - Tribal elders + reference works

Typical sites - sandy soils on terraces, knolls, fields
sites before 1990 - coastal ponds - oollow topological focus

Predictive models - factors for prehistoric + historic
Thorpe et al. 1980 - highest rank 300 m of low salinity streams + large wetlands
Kulholland 1985 - modern wetlands - habitat for wildlife +ves
Dincecco + Meyer 1999 - ≤15° slope + well drained; good drainage

Difficult - separate repeated short-term & contemporary occup
LT settlement

Aquinnah Model - A full range of environments, more balanced through time
many interior sites as well as coastal sites + coastal
CRMs - broader reconnaissance survey + range of sites
Use known to predict unknown - assumption

Historic - Predipl + functional categories
Domestic + ag - arable land, 150 m water, transportation network
Maritime + land include - harbor, stream, transport, natural resources
Commercial + neighborhood - near settlement + transport
Historic - 39 sites known - house/farm + burials
most in Old S Rd community - City of A
+ near Trail Trust Ltd

Arch Swain's Maps

Known sites + undisturbed areas, well drained
Site locations not shown

A - Peninsula 40-78 mi² 185' max.

-Marine scarp 75-100 mi² Cretaceous - Tribe owned
6 drifts - Noraines 500-900' thick
-A cliffs w/rolling hummocks to SE - drops to SE + ponds
-W compact sand + clay - clay near surf + supports streams - E of island - sand drain

Blown sand - cuts off some brooks - dam w/poor drainage
-ponds, bogs, swamps

Mounts form peninsula - connected by Herring Creek; small tidal waterway

Ponds - Black, Occooch, Lily + many unnamed

Black Brook - N-S from exclusive interior wetland to Sq Rd + Lighthouse Rd

Areas - Coastal PJs, Showtime, Laberumville Rd + E Port, Old S Rd/NS

Coastal PJs - up to 20' - must (230 ac) - Awap Tribe - trust + cons. land
contains majority of previously known sites - academic + amateur
archae. - from erosion + middens
Shoreline - beachfront, cliffs, wetlands +/== low rocky sand dunes + stratified bluffs  
Large wetland - Lobsterville  
prev known arch site - A/C l.im

Old/New S Rd  
Rolling terrain - knolls & knobs w/wetlands  
May wetland pockets  
30 prev. prehistoric + 25 hint

Lighthouse Rd  
Rolling hills fence by high broad knolls  
One large marsh  
4 prehistoric hill + 4 hint  
all CRM

Lobsterville/E Pach\scrub upland fence by wetlands  
several small lake paths  
No prev. arch site + 1 hinten.

1912-13 Guernsey + E.A. Hooten - camp. Men, Nash + N Squib Rd  
excavated & excavated remains - stone & bone tools, pottery, shell  
meddles + pit slipped features 2 bunks - Peaslee Pt Estabri

1930s Douglas Byers + Frederick Johnson R.S. Pach + Eln. Andon  
Hornblow Shell Hoop Site, Squib Cliff Shell Heap - 1st  
prof. sci info

1950s Gale Hudson Duke to HSoc - Norton Site - V. Haven - shovel
Mrd Andesite - Coon

Pitche 60's - 6 sites Chilmark w/== 1st chron cultural history  
framework for ENE F model of human adopt to marine resources
Paleohistory 12,500 - 10,000 BP
small bands - sophisticated + specialized lithic technology
points, scrapers, tools, drills, gravers
diversified seasonal hub & a 6+ range over great
distance resources - also social job margins
MV - one of more elevated land forms - rivers & wetlands
could have attracted NA Pine forest
small group highly mobile H/S migrants now
No in situ material on MV - 1 fluted & 4 unfluted pts from
this period - local collections (Beard et al. 1983)

Early Archaic 10 - 7,500
1 biface-based pt Saxifrage site in Ag
isolated find. Some pts in local collections -
from Norton site & OB
So potential for these sites

Middle Archaic 7500 - 5000
Warming + ecosystem diversification
settled - planned seasonal models now oriented around rivers/shore
fish/gather/hunt & new tools - net sinter, gouges, adzes
plummet & atlatls (Pinc 76)
multi-seasonal & hunt - 1 in Ag interior
> 25 MV sites - several E arche Nice Pal, Baldens core - C/WI line
maritime adaptation - lowest skull middle lengths
subsistence diversified early diversified
Pts from Norton, head of La sequo, Witchbrook Site of streams

Witchbrook Site? Headwater streams
into TGP
Intensive Hunt + Fish, esp anadromous fish
Poss. adapted to maritime
2 pts on Tribal Trade Links

Late Archaic 5-3000
Many more sites - Popin increased - continued trend toward
generalized exploitation of resources with ecological niches
NV - near swamps, marshes, tribal fleets, streams - coast +
interior.. different traits on pts
3 distinct cult traditions - Laurawtren, small shell/cont. + Susq.
MA - all 3 but SS predominant quartz - mason + wetland
T/O NV major - ponds + shorelines - often w/ shell middens

Ritchie: NV - 1st evidence LA Laurawtren + SS
Some Susq. also fowl
Vincennes Site - stealth + 4 dragn. pts
emphasis on marine
dog bones: horn II + Finesh Byth
SS = Squawcreek culture to Eithis (now know that SS used
into LW). Organic studies of Squaw - SS in LA thru Woodland
expedient tools easily fashioned from quartz, quartzite
All coastal nd sika - LA thru Woodland
7 interior sites - find spots - hunt/collection

Early Woodland 3000-1600 BE
Woodland - most prominent esp for GH/IC
EW generally fewer sites - poss faster pop in but also
continuation of SS point p.t.s so confusion

Woodland - ceramic vessels, hort + new p.t.s, increase use of coastal resources. Mgt skill major

EW - 18 sites - 4 Ritchie - Pre H, Peterson, VMort, Howard several Ag coastal + 1 find spot interior

HW 1650-1000

more common than EW, 1 southeast, 1 popin; greater social complexity; regional trade; proliferation of ceramics H.P.G. + shellfish

LW 1000 - 450

Aggregation into large complex villages +o Near

NE - much more modest settlements - extended family groups moved seasonally; large shell middens

Archaeology - focused on midden sites; intensive use of harbor margins + promises

Ritchie - knives, side scrapers, drills, arrow guns, axes, pestles, sintered awls, points, fishhooks, pipes corn - bount of some type

<1990 few interior sites since much work by for Tribe + landowner

interior use - tributary streams, assoc. wetlands,

connect historic Wamp, tribal development to prehistoric patterns -
settled + resource development research - invaluable on

dynamics of HU + settlement
Historic Period

Verr.
Goaenoid - GH - Dover Cliff

Pening 1609 - Edg Harbor; started Cheespy Bluff

Few Contact Period sites - 1 Squib Ridge, also Houn III + Prat-Tis
1642 - Mawew Edg n 1500-3000 natives (1616-17 plague pass.
Ag - 1 of 4 Sachemships
Mittak - ruling sachem; his father Nohtoosset
1643 Thos Mawew Jr death 300/1500 MV native Christian
Aquinnah - most resistant but Mittak converted by 1667
Mittak - magistrate of Ag until 1683
1693 Congo meeting house
town system
Ag encouraged to organize politically according to NE Christian Indian
1674 Goodwin 600 Praying Ind families on MV + ACK; 6 PI villages
strengthening intertribal alliances
King Philip - son of Massasoit - Suprem Sachem of Wampanoag
Ag did not join - islands on periphery of war 2001; Hithe
Mittak + Ag council - KPhilip - enemies; MV Inds formed a militia under British flag (allowed by Gov. Mawew)
MV native loyalty kept them from moved to detention w/ Deerls + Naumpee

10 reservations or Christian Ind comm on MV oft for KP War
1687 Ag penin sold Josiah Mittak (son) to Thos Dongan
Gov of NY (Earl of Limerick)
1687-1711 Aq - manorial system; land leased to natives
1711 Transferred to NE Company - branch of Corporation for the
Propagation of the Gospel (England) to establish reservation
Ditch - 4' wide + 3' deep - across neck set within
thorns and barberries. Corp. Gate at entry
Natives - tenants, Corp. landlord, public excluded

Oldest Baptist Church America early 1700s
also Congo Church on Old S Rd

1712 Samuel Sewall diary - 50 houses Aq - mixture
framed houses + wigwams; barns, animal pens
farm, fish, sheep, cattle, oats, barley, wheat, corn, pump

1723 Aq natives (10 chiefs men) quitclaim 800 ac N_ASS
penin border. Men Rel to Corp who leased to Eng farmer
Gave natives legal basis for occupation of W's part
of penin. 1 parcel 1 ear of corn/family every Nov 1

1747 - 112 natives; sold grain etc; labour in whaling
1786 - 203
1776 map - several parcels w/stratum
1802 240
1807 Freeman - 26 framed houses, 7 wigwams, 3 barns, 2 meat po hour
1876 MA control; Inds waves of state w/ little independence or control
State Acts 1811 + 1828 - Incl. = inferior status, incapable of self gov't; could not sell land
Aq rejected this, forced overseers to resign; de facto autonom
Act of 1859 - Aq had independent law regulating internal affairs
= Indian Traditional Law

19th c Aq natives - active New Bed, Ack, Falmouth whaling
1838 - 235 pop'n; 1831 native land = 2400 ac
1845 - Whaling collapsed + most had given up corn + self-suff
most purchases New Bedford + RI as easier over seas

Brickworks - Irish Mitchell, sold to Nathaniel Harris + sons
max output - 17,000 bricks/day in 3 kilns
Supposedly - remains of narrow gauge RR near old clay pit near
1861 - natives - no more individ sales; 100 tons sold to support poor

General Court 1855 - 3 commissioners - bounds Native land's
Followed stone well dividers: Nashaquitsa + sq. since 1714
Peace 5 yrs. to sort out land
1870 227 tribal members
1871-78 Peace + Peace rest of common land divided
 couldn't divide cranberry lands or clay cliffs
Incorporat'd

Native language retained to 1780s
Landscape wide open
1878 4 sheep 48 cows 42 oxen 71 cattle 29 horses
1870s Lobsterville began w/ Lobster Industry
Sea anchorage inside Deepish Bar - small boats
before dredging of Men. Creek
Double row cottages N of intersection Lighthouse/Lobsterville
Village attracted buyers from t/o region NYC

1890s GH Clay Co. shipped to mainland from wharf near lobster harbor
- revenue to town

1871 South Rd constructed N of Old S Rd (Camto Co Rd)
may new lots + relocations up hill

Late 1800s shift to non-tribal ownership; 1895-1900 owners
1916 ~ 1/3 land non-tribal; increased shift to individual ownership

Late 1940s 
GH cliffs eight sun

N shore dock "Steamboat Landing" - OB folks
clay

1920s Old S Rd Community almost completely abandoned
- 25 native houses from 1844, 1924 in near Tribal lands

1915 - 175 → 1940-127
Main Road paved 1930s

1950s electric + telephone to Ag - ↑ non-natives

Hoosnap Trail 1956 for houses + access + Lighthouse Rd

1972 Tribal Council reactivated (enlarged 150 acres)

1987 - Federal tribal recognition - 1st Entity
1938 - destroyed 18th/19th C clipper wharves, Steamboat Landing + principal cranberry beds

1960s large summer estates
Summer Pop'n 1350 201 year-round 30 houses

1993 GH → Aquinnah

17th C Native Settlement - oriented towards salt ponds; dispersed houses or hamlets of related families

Early 18th political/social division - w/in group: Congo vs Pequits, kin lines

Old South Rol - access to farmland highly intermixed w/ wetlands + mix of farmers, fisher, tourism

Aqu Wamp - "GH Indians" excellent seamw + wherks; major contrb to regional whols from early drift wherks to deep-sea on New Bed, Falmouth, Mystic

Many houses - large oak timbers from shipwrecks
Native adept of wts or wwoman to framed dwellings
Crofter-style

Short-lived mill - location unknown

Some sites - continued Wampanoag lavel use Archaic to early 20th C Herring Creek parcel (Shoreline Mem Pl)
Prior to survey 50 prehist, 31 historic sites

6 7 added CRM

8 6 this known widely known

many locally known but not (documented)

MVHS (Bill Bock) - relationship w/ artifact collectors

Peter Van Tassel

Randy Jadding

Tribe retains control over site location

Albert Fischer - good collection

Recorded 3 of Guernsey's sites

J+K - N edge Men PD - clunes + cranberry bog

P - avocational shell heap + NA cornfield (Guernsey)

Toad Rock - off Mashup Trail - connected to Mashup, likely plot

Archaeological Models

Mary interior + coastal sites

56 prehist = 43 isolated find spots or low density artifacts

single projectile pts or lithic chippy debris

13 = more complex, high density, multi-component

8 shell middens sites along avoided beach fronts

some ag ossos, w/ these sites

Wshore Men PD - recorded by Harry + Ralph Hornblower - summer

residents who recorded shell middens across old + excavate
a couple on family property - Squibnocket Ridge

Shell middens - up to 1/2 mi from saltwater
Squib Ridge - Chilmark - LA + W shell midden, trash + story pit,
hearth + lithic workshop on upland terrace + knobs over coast
+ Sq Pd = utilitarian + ritual
similar to Horn II, Bl Pd Brook, Herra Cr, Gerhard

Also near wtr

Both = well-drained sandy soil
Not soil texture - sand vs rock vs morain

Guernsey J - large shell midden 1/4 ac. w/ pottery + tools
K - 2 shell heaps + charcoal
P - heap + workshop, occupation + anearl cornfield

"The hills + vasts retain their original shape, some fifty hills
being counted. Several of them were opened, shows to soil
to be very black and full of broken shells + spiraled bone"

Coastal Pits - expect small special purpose camps to large village-like

Multi-family h-bh

Pel shoms = ceremonial sites (R. Jardin)

burial features above Sq + Ch Pts

Low sensitiv areas = kettle pits

Shoreline - some extinct artifacts from clumps + knolls

Zacks Cliffs - clay cliffs not as high = sandy tops + artifacts
E of Squib's Pol - multicomponent site in eroded bluff
hearth, pit, stone, bone tools, pottery, burial

Interior knolls adj coastal wetlands + stream drainage

Old S Rd/ New S Rd
small sites t/o when well drained - MA-> LW
moat, projectile + chipp, weak - hunt + roam

Small knoll over Black Brook - chip debris, SS pt, possible camp

So far no large multicomponent sites in interior
prob more short-term activities w/ habitation +
ceremonial use more to coastal pol mus

Prehistoric extend "wherever well-drained, elevated + level
soils are located in proxim. to coastal wetlands or
poorly drained depressions

Harpoon Hollow site - W of Rd; immed N of State Rd S of
unnamed Rd - report by R. Davis - chip debris,
expect midden, post molds, pit

Historic Resource Model
Site info also restricted to Tribe
Town Boundary 1714 fieldstone wall - estab by Society
for Propagation of the Gospel in NE 3'
Cut gravil blocks - Not South Rd - 1993 photos -
Men - Squib Rd could be part of 1714 Gate
1714 ditch also by Society

NW Corner New Rd - could have narrow gauge rail - to coal pit
on W side Clay Pit Rd
NE side - reported 19th c in house fallen

Coal Rock - created when Mashup turned coal into stone to
protect from 19th c settlers. Common used as typo. play;
mean etc.

Clay Pit 1500 ft² cleared where clay Pit Rd forms 90°
orange + red

Vestiges of orig Sandy community N Lighthouse Rd intersect w/ Luskerville Rd
Daniel Nevers - Lord Eust prop 4 cell huts, barns, stables
Huntington, E. G. Preliminary report on the Lagoon Pond site
Martha's Vineyard, Mass. Massachusetts Archaeological Society
58-63.

Lagoon Pd- former connection via Bass Creek to sea - tidal watershed
filled in; now conn to VH Harbor by eir-erized + rip-rapped
channel.

2 extant sites- head of pond + near Bass Creek - Prob permanently
Head of Pd- abandoned before white.

Other- Nabscoott- continued sub-archaeology of Tekem.

Excav- Head of Pd - no evidence of Era; Extensive springs, highland
winter protection, extant as lad, + fish + shell abt

Narrow channel 20' above water

at least 2 cultural groups

1. lowest - corner removed sick pts - sick uncommon on MV -
not associated w/ shells

2. Top - many sherd pts, much shell + deer most common

2 copper beads - just like those in Breton

Great tribal peoples

Early Archaic culture gave way ~5000 BP to a new group migrating in from west to LA people who opened quarries

Ag 65-85% of person's daily food

Verrazano - cornfields over 1 mile long

1621. Pilgrims found fort w/ 40-ft poles set close together, 
clinch 4-5' deep & bridge to only enter

NA - often characterized as highly reactive to changes in biological environment ad passive to Eur. colonization
Collabo - Mash community, HF, VMass, US
Patterns of continuity pre-contact - contact pre-contact = 18th c
Lwr contact - many Alg speck groups centered on regional web + participated in semi-permanent settlement occupied sites or seasonal by a Pequot - 250 mile homel
Spatial - regional commun - household
NA sustainable plant root wetland, woodland, open field
Weeds vs crops
Household - rnc. space w/in settlement site - herby, active, and

t 250 site 50 systematically excavated 10 district
10 - single component, discrete features + activity areas, 100 + acre
large amt. plow
Mcoholic fort site - fortified place original - King Phillips war 1675-76

Wild plant - dominak - sweet potato, squash, corn, - continuous will into 18th c "living with the land" no "on the land"
Similar plant use + land use - the historic period

But how to take further - ubiquitous of app. small differences
S. Kretch. 1999. The Ecological Indian

Pleistocene Extinctions

Horodam + Emil Haury

Eelden. How to treasurize nature. Edens + people living + farms

Exhausted land + demand for wood.

Nutritional stressed by reliance on maize - protein of remarkable low quality.

Health worsened why scrub oak grasslands no longer burned.

1260 Greenland voluting under N rule - N = Kola peninsula, Iceland, Orkney, Shetland, Hebrides, Faeroes, Isle of Man.

E Selkirk - 400 farms 22 churches.

W " 83 " 3

Total of peak ~ 4000 people

1321 Hans Egilson N missionary - sailed to Iceland, expected to find people - only ruins.

1380s-1400s Barlason to E Selkirk - only unburied ships + livestock. E Selkirk intact - so W emigrated.

1410 crew stayed 4 yrs - intact w/ no problems.

until 1500 - mingled w/ Eskimos, emigrated, died.

Greenland ship in Labrador as late as 1847 - Markland.

North America - Davis Strait - narrowest at 250 mi. - Baffin Island.

Route: N to Disko - W to Baffin & Clyde Inlet -> S to Labrador to Newfoundland.

Earliest mention 1375 4th book of Geography.

Vinland - island w/ grapes + wild wheat.

1130 Book of Leeland - mentions Skraelings on Vinland.

Bjarni Herjolfsen - adrift on Iceland - Greenland - seas unknown shows heif seeks out to find land - settles w/ 35 - off discovering Helluland, Markland, Vinland - built houses - grapes.
Erik the Red 985/986 colonized Greenland
Leif stays 1 year
Thorvald Eriksson to Vinland w/30, live in Leif’s house
killed by Skraelings people eh 2 yrs
Thorfinn Eriksson abortive trip – crew of 25
Thorfinn Karlsefni 65 mnu, 5 q live stock trader bright w.
Skraelings live in Leif’s houses 5-7 2 yrs

Farmers, bowhun, explorers, excellent seafarers

Didn’t actually know what grapes looked like?

missed glow

Brarni – Nfld → Labrador → Baffin

herc route back opp direction coastal sailing

Helluland – Flatstone Land – Baffin

S of Hamilton lake – beehill beaches Markland no grass

l’Anse aux Meadows – beehill grass

Erik died of plague on return to Greenland

Both Eskimos + Beothuk incl (extinct 19th c)

Vinland – vin old Norse pasture same in Shetland;
grass of utmost importance grapes + wine – late abbian

Land of Meadows

George Decker – fisherrow from l’Anse aux Meadows – took him directly
to settlement 1960 – mounds

Excavations 1961-68 9 houses ski
Wife's archaeological report - 1977 - The North Discovery of America - Section of this book.

Marine terrace 4m above; shallow water 20-30; whales +
fishers settled elsewhere.

Arctic maritime conditions due to Labrador current that splits on
Newfoundland near Aug 20 50-55; much fog; ice until June.

Was forest nearby.

Bog on

Driftwood Bay, Espanola Bay.

Turf houses up to 24m.
Larson, T. E., P. M. Burns, E. S. Chilton and D. Douchet, 2002. Lucy Vincent Beach: Another look at prehistoric exploitation of piping resource off the coast of Massachusetts. Northwest Anthropology, 64, 67-73.

Almost all W+ LW
LV - Poke -> C

Flotation - recovered herring, which isn't in Ritchie's sample.

Fish bones - 2,225 - 1383 identified

Surprised by low occurrence striped bass - common/14 or still bias?

Goosefish/Monkfish - 73%; Shad 0;15%, Menhaden 13%.

Scup 4%; Perch - 6%; Sturgeon 0.92%, Sea bass 0.2

Striped bass 0.1 (1 sample), Cod 0.1

Goosefish - up to 1.5m caught - usually in deep water on banks, sometimes they are found in shallow water - also mentioned

Next apparent - recapturing source of food - most appear to be sprin to autumn vs

Lucy Vincent - may be G Burgess Site A - couldn't find his field notes
Lavin, L. 2004. Mohican/Algonquin settlement patterns

Most hypotheses derived from early Eur. doc. + maps + recent arch. data

Blau map
1635 New Netherland Dutch map - 2 policed villages w/closest row
quonset-shaped houses "made of fortifying their houses
among the Mohicans". Supporters - Mohicans in policed
villages w/ long houses like Iro

Brasser - yr-round pol. village - w/ pop's leave part of yr
Snow - also - stockaded hilltop villages Mohic

But - no stockaded arch sites

So Bender & Curtin - hypothesis Q. Mohic dispersed t/b
S homed in small unfort. household groups 1-2 houses

Goldknut - LW - heart of Mohic territory

Lots of native plants: sig nut processing - butternut, hickory + maize

Charred wood - discusses Indian land clearing!7 possible
land-clearing for horticulture - open woodland!?

Clay + bottomland plant

Lots of post mounds 1-60 cm deep - overall 8x11 m; 4x11 m
rectangle AD1400s

Few features - sparse popn + semi-serial occup. - often inwld
Small unfort. field; small family groups. Summer & fall
deer, nuts, fresh wild fish, fish some fields max 500 m

No policed
The Iroquois were true farmers. Also, many people were foragers and fishermen as well as horticulturists.

Supports Beards + Curwen - dispersed, unfertile hamlets

Similar to other sites in region

Kraft - The Lenape - Upper Del "There is good reason to assume that these people lived in small dispersed unfertile farmsteads, i.e., free from the fear of aggression, at least until the coming of Eur. settlers." Krut 1982

Sim in NE

Russ. HANDSOME HOUSES - numerous small hamlets, paired wigwams, and isolated houses are present all over the lands...

Most of these settlements were small and tended to blend with their immediately surrounding environment." 1987

Evidence for Native American houses is rare for NE as a whole

Most 6.5m oval or circle

Ezra Shih 1961 Niwotic vs - 2-12 people slept extended on

वज अर निमित (nubi) or repeated

Where >1 structure in mounds - nucleated or rectangular

In contrast 1ro - large yr-round partially walled village. Now larger longhouses large and pop'n constructed at heuv's fertile villages.

Town 30-100m by Community 100-200

Much more host material >> reliance on host true farm
Table 2.1: Timeline


- Direct as well as face to face, lengthy & complex relationships
- Contact = Def = verb; ongoing process influencing already dynamic culture
- Small & large scale entanglement of culture; "early colonial" not control
- Material identities
- Not acculturation, not passive, unilateral
- Imperial agendas = economic, religious, political / strategic
- Encounters = encounter, confrontation, exchange, influence, integration (of things), modification
- Artificial divide pre/post, historical/pro-historical
- Archaeology of historical process protohistoric
- Contact sites = ancient
- Eur sites = historic
- Creole = colonial settlements & pluralistic entretips
- Eur, Native, black, mixed
- Historic sources = all European perspective; written for Eur consumption
- Noble & royal, general commercial, aware of competing groups; models of writing & portrayal, bias, timing, location

Archaeo - ethno - images: To fully interpret requires specialized background and knowledge of authors, context, attractive models & models. However, art is readily consumed by literate & non-literate; ethno readily observed by many. Archaeo most difficult. Tempting to take art & ethno on face value.

Fill major holes of archaeo - quitar roles; clothes, use of implements, etc.

Interp of material culture. Art - e.g., Renaissance: notions - form, figure, etc.

Archaeo democratizes, reveals unportrayed; quotidian; biased but not filtered from outside; daily life, not ceremony, common person; biased towards most common

Bias of historical practices of archaeologists, historians

Excavation vs sampling vs collection / filters, categorize
No real motion - pre-contact indirect influences, changes in subsistence, settlement, houses, power, migrations; impact of Indo-Eur on ideas or their influence back in NA; why thy return

NAGPRA - N. Am. Graves Protection & Repatriation Act
Publish + Federal Register + return

No single account of past; silence + filtering in many records

Major common problem - correlate ethnohistoric + archive records
Archaeologists tend to give priority to written documents over their own archaeo findings - 2 independent sources easy, broad in scope, familiar lexicon
Illustrations - often extracted from text; engravings derived from original art, much of which is lost

archaeo - visual - ethnohistoric

Maps, pictures, writings - bounded + controlled spaces + people;
"new loud use patterns + loud teary practices impeded earlier native activities" NASSaney 2005

Indians mocked Eng for exorbitant trade (vix versa)
1524 Abenakis mocked Verr's crew

Use of practices + materials - went both ways

Gifts + exchange - e.g., diplomacy → economics

Eur - wanted furs, needed food - completely revolutionized Natu/non-Natu
Materials refashioned + used in cliff ways -coins + ornaments; copper bowls to ornaments, weapons; religious artifacts → arm. + lead - melted;

Eur came to New World to create the kinds of communities thy left, with impacts
Iroquois - Five Nations - Seneca, Mohawk, Oneida, Onondaga, Cayuga - coalesced into Haudenosaunee Confederacy in 1641 C

Extensive export trade networks - moved Eur goods before face-to-face contact
Extensive use of Natives as guides, interpreters, informants + slaves in Navigation

1620 Puritans - NE a virgin wilderness vacuum domicilum

Intermarriage - prohibited in Mass.

Bartholomé - common third gender - anatomically correct - act like other gender

Champlain - to get furs + look for opportunities

Emergence of scientific illustration w/ NA exploration

Natives - Noble Savages or Barbarians

Women silenced

Natives often wore Eur garments - e.g. Gosnold 1606 Niemen Niemen

one w/ waistcoat, breeches, stockings + shoes

cloth widely used + desired

Most preservation of Eur fabric - in association w/ metal

Mixed Eur + NA materials

Change in work as: adapted cloth, clothes, materials, metals; as + furs + food

Lucy Vincent: EC 2m x 1m pit; HV prof.; most comp MV archaeology project in 30 yrs. EC was math major.

LV: "Special place on the landscape for thousands of years."

12'1/yr erosion 2/3 lost since 18th C

4 instructors + 14 students 1950-1990 1/10 2000

Plowed, mowed. Pit. English smoking pipe; Andrew elk flint - so fashioned own flints

1995- human remains - Ruddy Jardin - Wamp - first spotted

Tooth of bull in cliff - worky now with EC

Diana Doucette - HV grad student - field director

Ceremonial signficant site - high place near sun for burial

1996 - 2nd burial

Tobias van der Hoop - don't move or excavate bodies


Vineyard Gazette July 10

3 town beaches - LV, Squibnocket, Menemsha since 1995

Martina Macromonaco - Chilmark beach superintendant

3' from dunes near beach walkway - threaten with lawsuits

Douglas Cooper - consultant geologist - 5-10' per yr.

Cooper Enviros Services - consulted w/ Chilmark homeowners

Whole hill - W of LV - houses moved back. Bldgs inspected

Leonard Jason

"If your house is 500 ft from the cliff, then you have about 50 years."

Discuss roy of beaver

Trade quickened in 1580s - Indians of St-Lawren R produced sufficient furs to lower beaver hat prices

Ecological repercussions of diminishing beaver - muskrat, deer, moose etc. Other habitat, browse, open land.

Shifting cult - mimics natural patterns - poly-cultural groups each plant foods -

New fields cleared w/ fire ~ about 8-12 yrs

"Women had a direct impact on the environment."

6500-8500 calories - grain products SE Indians 1605-1675

12 animal + bird

10 fish + shellfish

8 nuts + legumes

79. Corn, bean, squash - evolved intricate, highly successful interdependencies -

diffused N from Mexico 3-plant polyculture - optimize weed and pest control

Hort & f-g evolved in symbiosis w/ local ecology

Impct by Eur - new app tech inc.
Mitch + Elizabeth 9-8-25

3-5000 Late Archaic peak - sites, trade
climates, nuts + forest composition
nutsy stones, mortar pestles

5-6K Shoreline + river stabilization - fish + shellfish

Beans after corn  LA - sites are everywhere
Dincauze paper on LA; Capsul prehistory

"Nast Forest Archaic" - snow
Bunal ceremonialism  LA due to pop'n
Intergroup violence

Regional young forest

Site dusty Phase 2+3 w/ dates

MA > LA > wetland > more general

possibly due to appearance of wetlands

8-7 much sites  6.5-7 highest hemlock
7-6 few

15-20k at contact
Late Archaic 5-2000 BP

- Sites, trade, climate, nuts, fruit, hunting, stones, mortar + pestles
- Shoreline stabilization: shellfish, fish resources
- Dinosaur
- Most Forest Archaic
- Burial ceremonies: pot'n + interment rituals
- Wetlands

Followed by resource stress

8-7 many sites 6.5-7 high hunted
7-6 few

15-20x at control
1976

Moeller, R.W. Some thoughts on Late Woodland Ecology
Archaeological Services Journal of Middle Atlantic Archaeology 12: 61-66

LW subs in Nth - plant domestic + intensive hunting + gathering
Forest edges = diverse for human exploit + consume
Transition: band level HG & village-based hunting difficult
With severe repercussions in late 21st

Relationship hunt, vil + pop'n LW recognized by all arch.
'The observed relationship among hunt, village, and increasing
pop'n claim LW times is recognized by all archaeologists

Need to understand + reconstruct environment, practices to unerased sub.
Traditional adaptation to trackless wilderness = structured land +
surrounded by e.g. forest, idyllic life = myth

Denecau - pristine myth - early observers unaware of human impact
obvious to us today

Raw vivrant forest myth
Myth due to open nature of NW Eur; most obs after Eur. gained
foothold + Ind pop'n decimated, forests filled w/ post urban

Myth of unobtrusive Indian - romantic, not scientific lit

Tension in Ind times - due to depauperation of trees + competition for arable
land; huge labor investment - hewn wood, etc

Caldwell 1958 "primary forest efficiency" - began Aramex - finally learned
to exploit a wide diversity of plant resources - new known fiber
and divin...
mosaic enviro w/ diverse ecotones
Assumption comes from swamps - people in decid forests
Palaearctic didn't know why could crash oceans; minimal edge
Edge effect - occurs when closed forest is cleared for living space, firewood - construction materials. New edges = greater diversity
Destroyed virgin forest to live as it people needed more resources → hort, high cost
Fire use - great antiquity - most enviro destructive practice - indiscriminate use of fire to clear for hort & aid hunt & fish & defend
Role of climate vs humans in curing major Δ
R&M - extinct this back thousands of yrs
Human intervention caused major shifts - veg - difficult to remove plants
Advent of hort → mass enviro destruction + social disruption
NY + PA - first little maize they couldn't live w/o → villages + war
Soils depleted as forest cut
More food + sedentism from bands → villages - tied to land → new politics
W/no hort - slash + burn → intuitive scope for land; protect fellow land by
put in village on it
↑ hort → ↑ intensification of hort/after
Hints to a society on the verge of collapse - subs region deputy resource, faster than replaced. Thus the Eur arrived
Palaeo - Archaic - Big shift in culture, lives, tools with environment
Deciduous trees - more diverse foods and survival; tools for
Sheep + limber trees, dugout canoes; fish; grind seeds + ab
Storage larger sites, more reuse, more people
more ceremonialism

Woodland - ground polished stone tools, ceramics, villages, domestic
plants, bow + arrow
Domestic + Villages - v. late

V. little insight into most recent prehistoric period

"Because the Woodland Villages were located in the places first cleared
and settled by Europeans, these villages were destroyed without a
trace before being studied and recorded.

"V. little look backward to A

Domestic plants - v. late - lived easily on H-6 and did not need Hort
Support diet"

Lower Miss. Fl., Ohio Valley; Upper Miss.; Tennessee, Appalachian and Piedmont.

No mention NE.

Appendix of Comparative Sites - Stonehenge, Giza, Acropolis, Angkor Wat, Piazza San Marco, St. Peter's Sq.
Samuel Eliot Morison, 1971, To European Discovery of America, The Northern Voyages, Oxford University Press, NY

Eric the Red - left N for Iceland, found so explored Greenland named as would attract "if the country had a good name"
AD 985 returned to colonize w/ 12-16 boats; Icelanders E+W Settlement both on W Coast

Biarni Herjulfsson - 986 mistook Greenland - hit unknown land - flat and wooded - Labrador & Baffin Is.

In Tale of Greenland "saga"

Leif Eriksson (son of Eric) - looking for wood -
1001 - 35 mo - 1st found Baffin - South to level wooded coast w/ broad white banks - Markland, Land of Forests - Wonder Strands - beech - 35 mi stretch of Labrador - middle of barren coast

To S - Belle Isb

Set up houses; salmon, grazing, meadow

Ingstad - excavated 2 great houses 70'x30', level

Primitive ironwork - bos iron

Steam bath 75-90 people; food on issue

Site used by 2 further expeditions from Greenland

Small village

V few Esk or Inuit

Thorfinn Karlsefni 1008 3 ships 250 men - stopped at LANGE

AC Modau - Snorri - 1st white child
Karlsten

sailed south stayed on coast over water
interactions w/ Indians v. bad; fought, so left after 1 mon
Captured 2 native boys in Labrador - took to Greenland,
baptized them & taught them Norse

1013 3rd & final visit Karlsten - Greenland
Fregdis (f) & 2 others in ships to L'Anse au Meado
murdered etc. took produce from land to Greenland

Gave up because of health - straining

Greenland last bishop visited 1332
N ship visited 1406-1407 only wild cattle

Ivory trade for walrus undercut by African elephant

Black Death 1317 in N
N premonstratensians w/ G, English raids led

To

1497-98

John - Genoa, probably no accord
Cabo - know little, no portrait, no writing - son Sebastianus usurped;

Nf/Lo - June 24 1497 Duke of L'Anse au Meado; travelled S
Saw bears & Selkirk

Beathert, Indians - Gaspar Corte B61 kidnapped Nf/Lo to Lisbon - had broken
of Harlem wh
Gilt sword + silver arms "made in Venice" - prob. left by Corte 1498

JC Topp, cool, saw haw trees & 'cult fields' - prob. blueberry bushes

下了 some saw no Indus.

2nd trip departed May 1498 - B-rol + not heard of - 4 ships
Gaspard Corte Real

1500 - 50°N “a land that was very cool and with big trees” - Nfd

1501: returned; “Terra Verde” - Nfd - kidnap 67 Indians

to Lisbon - Beothuke

Gaspard never heard of again

1502: Partnership Anglo-French - little record
few trips

Not clear that Sebastian Cabot ever went there - possibly w/ Peter in 1497

Jean Denys from Honfleur

Préférer 1504 earlier claim for French (Breton or Norman)
many Port by 1506 as King imposed 1000 Import Club

1520 - João Alvares Fagundes - S Nfd & Gulf St L

1521 or 1522 Colonists under Fagundes settled on Cape Breton
at Magdaline - Indians hostile after 12 mos.

Breton Fraternel destroyed houses & liens 1526-28

“Formerly at Port; sought to settle the land, which lies flat; lowest
but the natives of the country put an end to the attempt
and killed all who came there” - Jean Denys Albec

Johnaret 1527 - Hawke By Lob. - St St Jdhn; foul

10 firing vessels - 7 Norman, 2 Port & 1 Breton

went to Nova Scotia + Nfd - freq. locally more than West

Indies
Richard Howe 1526 London Nfld so well knew
collected 2 ships Triniti & William to catch cod &
gave London gentlemen a pleasant voyage - "first found
radio" 30 swtun.

Cannibalism

1508-10 La Pensée from Dieppe & la Jacquelie from Pléneuf
on Grand Banks

1509: Norman vessels landed 7 ind slaves at Rouen from Tierra

La Rochelle 1573 - 8 ships to Nfld
1559 - 49 - > 10/yr for 26 yrs
1534-65 > 100 from La Rochelle

Most fishery accustomed 2 fishing trips/yr 1st day-Feb 3rd
returned who full; they April-Sept return Sept.
"Wet fishing" no need of port;

1579 first catch of seal on shore for cura food

Verrazano Tuscany - 30 mi S of Florence - Verr castle Giovanni 1485

La Dauphine - royal Fr navy - Fr bankers

Journal did not survive - daily notes

Interpreted Pacific Ocean as W of Dieu Bay (Pamlico Sound) interpreted as
much narrower than Pamlico

sealbands - perpetuated in maps
A note from Arcadia

Kilb Hawke NC
- snatched a young child to bring new
- unknown future

Pulse = beans Missed Chesapeake + Delaware Boys

Anchored off shore every night

N.C. - Coast green w/ forest

N.Y. Bay + Narrows
Natives: many people, clad with feathers of
colors of divers colors - very cheerful, shouts of admiration - aren't of

Triangular Island - Block = Lure
- full of hills covered with
trees, well peopled, for we saw fires all along the coast

[ile of Rhode Rhode Island = Roger Wins] RW mistake V's illusion
to Block Island as to Aquidneck Island in Narr B.

Indians v. friend - 2 weeks; heard nothing about Miguel

Cov't Real who was taken 13 yrs earlier

Indians Wampanoag - friendly as red taken Aquidneck from
Narraganset & needed allies.

"good life = people" "fair in condition" women "very handsome
and well favored"

War great copper plates - obtained thru trade from Great Lakes

did not want iron or steel for iron
mourned & sing in death admiral houses & corn fields

Cape Cod "eminently promontory" have no grain

Abaraki - ME crude & evil manners ground nuts - hunt + fish

Suspects cavalier visits by raiding for slaves

N - Oranbee Norumbega Abnaki - quiet with Near Acadia

blood

3rd trip - Anchored off Darien - taken by Caribes; killed, cut up eaten on shore while brother looked on from his boat. "Eyes ruddy with fatness"
Estevan Gomez 1525 - Abenaki friendly in June  
sailed up Penobscot Cruised to RI, mapped bay, saw Whiting  
kidnapped Indians around New Port  
"filled his ship with innocent people of both sexes, half naked"  
liberated in Corunna  
NE area on Diego Ribero's 1529 map - Tierra de Estevan Gomez  
"many trees and fruits like those of Spain, and my rodents and salmon and seal, but no gold"  

Myth of city of Norumbega on Penobscot  
David Ingram - Eng sailor 1567 - set ashore w/ 2 others  
on Gulf Coast - walked by Indian trail to Main 2 yrs  
picked up on St John R New Brunswick - city w/ shore  
Champlain killed rumor  

Spanish NSld fishing 1540 - significant 1552 - 200,000 ducats/yr  
English + Banker + NSld  
Wet stray - Sp, Port Fr of Elends - salted catch + salted home-cured  
Ens + harsh - too foggy - had to import salt - dried on shore  
2 crews - boat + schoon had shellope to fish  
Dry fish led to Fr fur trad  

Whaling - as early as 1527 off NSld - harpooned + dragged to schoon  
20-30 Boats by 1574  

Britann, Normandy, Dieppe, Rouen, La Rochelle
Wairua killed off Magdalene

Frobisher - Esk woman, child and man - died after 1 mo in Esk

Poor preservation - human remains, faunal remains, marine resources due to acidic soils. So development of population estimates is very difficult, or almost #.

Use # sites and # diversity of artifacts as proxy.

Frag of artifacts + changes - freq + spatial distribution of habitation.

Early pop'n with deciduous forest 10-9 BP.

Gradually increasing as maturing forest in biomass.

4640 BP Pop'n peak - until 2000 BP; subsequent decline.

Relate to diversity + elusivity of veg. Expect inverse relationship.

-w/ diversity + pop. w/ elusivity - all flora spp = resourc.

-As diversity + to climax (4640 BP). Diversity ↑ after 4000.

As ↓ diversity ↓ diet breadth ↓ ↓ competition so ↓ pop'n + diversity.

Human pop'n ↑ as ↑ resource diversity.

Late Archaic ≈ forest climax.

Swigart W CT ↑↑ project's pt Early Archaic to E Woodlaw

EA 7 sites/14 artifacts LA 26/1441 EW 8/21

MM + Dinwoody - CT R = coast ↑ EA = UA

Spp diversity inversely to pop'n.

Mitch has

DeBarre map for entire island - Atlantic Neptune Co.

1770's maps for Falmouth? detailed

Liz Chilton - HU - field school on MV

100 Test Plots

Communities wide archaeological surveys - Chilmark, WTisbury, Oak Bluffs

town-wide MHC + MVComm

adventisement for Edgartown ~ $8500/town

Richard Burke - MV WTisbury Historical Commission

MV Commission


Mass Archives - Word file at UMass - MM has
A spatial pattern: $T^o$ + moisture $\rightarrow$ shift veg + SCD

Cult: wild food dependent - altered resource base, habitatility, carrying capacity.

P, sedge, Picea, Pinus + high fire (dry summer?)

EA - 11.25-8.25 $\rightarrow$ $\uparrow$ $T^o$, $\uparrow$ $P$, high charcoal - drier + warmer

MA - 8.25-5.75 $\rightarrow$ moisture, (summer), low fire, high $T^o$, $\uparrow$ mesic Be + Ca (C;)

LA 5.25-3 $\rightarrow$ $T^o$, high mast - 0, Ca (C)

W $\rightarrow$ fire (anthrop.), or winter precip with dry summer; $\uparrow$ Ches, $\uparrow$ Pi - w

Coincides cult/deme A + climate/ecosystem

Y Dunes and 11.6 - P-A transition Serren parkland $\rightarrow$ Clouds OA

Laur becomes collapse 8.2 - major $\uparrow$ moisture, $\uparrow$ $T^o$ + Be, E - MA

Hum decline M-LA + $\uparrow$ pop'n - drier

LA mast spp - max abundance

Pop'n & A-W grad hot cooling + $\uparrow$ leaf level + winter precip

Uncov - LW $\uparrow$ pop'n (1-0.5) maize adoption

Some veg dynamics

Pears et al pop'n reconstr approach: Freq radiocarbon dates, spline to smooth $\rightarrow$ 0 $\rightarrow$ 1

at regional scale

Pollen - interpolated 250-yr intervals - ave value major taxa

SCD over 500 yr

Charcoal - scaled 0-1

Openly to fire history of the Northwest. Burned-over district starts w/ aboriginal description. T. Dwight 1821

WPA 1938 - "perhaps the most outstanding national enterprise in emergency, hazard reduction. The federal configuration never materialized but residual debris that escaped immediate clearance did contribute to the infamous 1947 resin in Maine..."

Dwight - a major source - incl. WNY; Ind annual.
Richardson - looking in the right places. Maritime adaptation in Northern N America and the Central Andes.

Ritchie - mollusc evidence MV preoccupation of adaptation over time. Easy shallow water quashogs only in LW-burrowing soft-shelled clams. mobile scolopidea first and mammals. Didn't use sea level data, mentions briefly.

Doesn't discuss island expansion.

Because - found no evidence before LA and all Flat Labrador sites post-deh 5000. So interpret that maritime adaptation only LA or later.

Similar/analogous in Peru.

1960s: major advances: oceanog + geol. Worth to plate tec-tonics - first discussion of sites below sea level. "computed possibility that Salwen 1962; whole segment of coastal prehistory lie hidden under shallow coastal waters.

Hitherto - often explained by low density of food or timing for coastal people to gain knowledge of marine resources.

NE - low resource carrying capacity of environment - responsible for sparse Late Paleo.

Poleo + MA sites do exist - filled out Ritchie's work by 2005 - 9 fluted pts + 6 bifaces. NW 101c - MV onto buri on a vast continental shelf visited sparsely.

MA - 1st major MV occupant. - Witchbrook WT is
"Drowned sites" - Tuck explains causing ENWA

Belt Lake + L'Anse Amour - Labrador - tech + faunal - mixed terrestrial + maritime economy - sea mammals

Lower Hudson - shellfish by 9000

Drowned continental shelf Northwest - mammoth, mastodon, walrus, musk ox, giant moose, horse, giant seals, polar
+ peat + oysters

Resources for Hunt-gather on coast for 1st inhab.,
8000 BP = shell mound off LA/TX
Deer Island oyster middle ~ 6100, Tuck 1991

Need to look at maritime occupation from inside out

"maritime way of life was established as early as people
were inhabiting the W hem.,"
technology, fish hooks, cucumber floats, airbags

Changes Gulf Stream + rising sea levels - profound effect coastal economy
+ drier + avail of marine resources

Sauveur 1975- prior to 8000 BP - swordfish deepwater cod + herring

pushed - as 1 Sea level, 1 tidal amplitude + upwelling

colder water ~ 8000 no swordfish + herring

Cheg's oceanographic + ecology conditions can be major factor
in demise Maritime Anch.

Late Maritime Arch.
Late Maritime Archaic 4200-3500 - longhouses +
pop'n, social + economic complexity

Fitzhugh 1995, Hood 1995

There is now no doubt that as soon as the first "megafaunal"
Ice Age hunter-gatherers entered the W Hemisphere they took advanta-
ges of the "bounty of ocean resources".

11-12-85 R Monie Vital

The submerged coast shelf is the last frontier of the arch record
for the missed 5000+ years of Maritime + hunter-gatherer
in the W Hemisphere, prior to the development of social

Major change occurred + To responsible for societal
changes: "Net+ NA + Peru"
as well gives color + titles such
The GRADUATE SCHOOL of ARTS AND SCIENCES

EARLY INDIAN HOUSE @ Rowatoop

20-25' across 2 1/2-3' diam Saplings
20' poles bent over + leached together
corr. n 10'-12' high

1964 - Tyeck + Richardson

Owasco n 1070 AD - Ritchie - associated to Owasco
largest of Early Owasco

Good evidence corn cult + beans + squash - sedentary farming
Large houses 80 x 20' 92-12' (73' main + story
or annex)

Bate - stratified hamlet n 50 people, one 'builds'
maize n 1200 AD

Kelso - low flat-topped rise east of creek + led
2 overlapping villages 2 ac. each both double polisches
Post molds 2.5' 2.12" deep
8-12 house 20 x 24 22 x 24 14 x 12 16 x 17
18 x 27 32 x 26 18 x 20 22 x 128 22 x 128 22 x 128
3' diam well mold 2.12" apart

Getman - most food storage above ground
storeage n 1 ac (51,800 ft²) 2 rows moldi
3' diam

--- OVER ---
Garega  
Defensive wall at narrow part of nick
2 walls 6' apart 9-27" diam

Houses
20 x 15   8" diam
20 x 212  149 x 20
225 x 20   204 x 20
187 x 20   212 x 20
137 x 20

layout 2 to 3 houses each

1550-1600 AD
n 600 people (700) Mohawk Iroquois with
few pieces of brass - incipient proto-halflane
French as Dutch not there until 1509
Cartier had contact in Laurentian Iroquois by 1534 + 1535
Hochelaga + Ste. Adèle

At least a longhouse - village planned unit
Paradeau - posts to 2' diam
Clusters of villages

Increasing size of houses - Middle 16th Century Iroquois

Trend to larger villages

Warfare + a sacrificial cult commanded Mid Oswego
ritual cannibalism autochthonogony

"War of Iroquois" 1642-1675 may single due to Europe

fear trade led to conclusion of village near colonial settlements

MV - "no prof archives, sites largely intact except amature island "populated from the mainland" - [strange notion that people came to MV, rather they lived there continuously.]

Other interest aspect of book - doesn't interpret sites in context of changing landscape context - old sites with interior hunting culture - but the west interior MAhdi have been a [coastal culture on the coast]

Archaic - forest-adapted deer hunters.

Reconnaissance Sept 1967 w/ Jim Richardson III who tracked him to MV

Sites - discontinuous use as pond openings varied + bad surf

Shellfish - coastal but heavily supplemented - semi-nomadic family farm

Keith Park - Seick's, Old House, Harlock, Fresh + Doggar

Brewster - high canopy forest - impressive assemblage - climate

Series of offshore islands - stark difference w/ modern development

Wampanoag - Algonkian - E Narragansett + Plymouth Co, W Barnstable

Cheever 1848 - Providence of God in plague kill; Indians 1617

named in King's patent for Eng voyage "wonderful place"

Kassapot - chief; d. 1662 - 2 sons; King Philip + Metacomet

SNE confederacy 1675-76; Wamp on le neutral

Quince Vermazenon - 1/2 p 1524 - 1602; 1621

Pilgrim - description of Wismaw houses - sapling trees, round, double matted; wood bowls, earth pots, baskets
full of acorns + fish; diverse unknown seed; 
mats - flags, bulrush, sedge

Verrazano - 1524 - circular 10-12 paces, circum = 25-35 ft =
no regularity in architecture - straw roofs
"change their habitation as circumstances or situation +
season may require" - easily done, as they brave only to
take with them their mats, and they have other house prepared
at once" - 25-30 people

Verr hunt - snakes + bows - later chief implement by Zitnok
Breton - strik for mowed + stone + Emeric stone
"with the least spark he marks a fire present"
Pilgrim - sawd pits, u/corn + beans + "parried Acorns"
Cod, lobster (no soft shell seafood mentioned), eels

Verr - dugout boats - sharp stones - cut down trees + hollow
out

WR "the exiguous historic records flesh out the skeletal
facts of archaeology" - can be sure acorns + other
seeds in pits + shellfish dried

3650 yrs occupied

Hornblower II N shore Squibnocket - Henry Hornblower II
S facing amphitheater v 100 x 100' z' gall - years 50' beh.
Assume heavily forested when occupied - shelter to N-NEwind, etc
1780 map - Squib Pd open; assume annual herring (huck) run
Δ use w/ open, salinizh etc
Henry Creek Nukenene to Squib Pd - artificial to allow spring run

1964
2.5 days

James E. Richardson, Frank Shambach, James A. Tuck, Harvey Salwen - Guest Prof NYU, Michael Mosby

[Only can sample areas of accumulation] Bruce Bourgu

Well trampled floors - shells broken
Sites abandoned, eroded, overgrown
Highly alkaline pH - good preservation of organic material
One carbonized corn kernel + carbonized acorn
Post molds 2-4" 4-8" deep; blurt base
Micromarks of hunters

perennial residents or use thru year

Earliest - deer hunters - started to use shells
Varied in shellfish use - motivation unclear - bay scallops - mobility + deeper water - hard mud; quahogs - on bottom;

long + soft shell clams - burrow
Air salinity + T°

Plant remains - non-crystalline

but arg part of diet

Dog - hunting

Offshore fishing technology - cod 4' 50 lbs - was exhaustive

Cod fishing off Normans Land 4 1/2 mi. 618 cod off Squib Pd

Lots of continuity - streets + cultural groups

Javelinas - short throw, darts + hand held spears; cured fish

Squib culture" - shared across Algonk - ENY + S- Mid

No diverse Coastal Archaic Culture - roots in NE forest

Poor winds; climate + s.e. - 3000 - cooler + moist - assum in miles

16 ft k - no Men or Squib Pd - but Air, fortbynd.
Pratt Site - Howard Ave Tisbury - along Ben Lucy Pk
Sheltered " by large trees of the primeval forest"
1/4 mi to Lagoon Pk - Source shellfish
Dog burial
Heard over human burial most 2-2 1/2"
40 post molds 1 3/4" - 4" 3-8" deep - blunt conical base
"distribution of the molds so such as to preclude the possibility of determining the size or outline of the doubtsful flimsy house"

Beaver in 2.5" chisel shaped in 2.5" deep
Primary game - bear, muskrat

2400 BP

Overharvest easily obtained ep - hard shell - required going into deeper water for oysters + scallop

Lowest levels - micragroup of hunting
Later family unit - blood or marriage 10-15 people
"Abodes seem to have been flimsy dwellings of mat- or bark-covered poles of indeterminate size and shape

Cunningham - W shore Lagoon Pk
Natural gully debris, but also shelter
200' shell mound

Dog bones - used as food as bones presented
Some camping directly on forest floor oval + round
Post molds - many + some form circles 16' diam
2 5/8 - 3" diam 7-8" deep - blind - slim construction - all
Phases of occupation - overlap even within stream
Minor rock-midway of inhabitation
Every level - deer predominates - older individuals prefer... also young + few + "discount the probability of conservation practices"
Grey fox - all levels - suggest large, stable food + trapping or hunting at night
Discontinuous
"there were no significant changes in subsistence pattern + the Cunningham site throughout the long span of its history" > 750 yrs

Vincent Site Main St VT, Haven - one of largest
Faces Lagoon Pol
Dog - attested carcasses tossed inmiddl
Post Mould - 2-3-4" (3") 2-1" - no meaningful array w/ Steep's 
pot - only 1 found + matched - preceded poltn week surviving Lauer'schon occupation interleaved with submerged by infilling Squibbetal cultural grown
Heath fern + abundant turkey
More continuous occupation w/ Fraser + shorter breaks
Brief interval above - ceramic pot

- NE
Petersen Nelson St's 35' above pol - 410 mi - II
hollow w/ spring-fed brook
4070 BP - 1 cal after III (2070 BC)
1 rolled copper bead - sanitation + comfort
Sanded areas - house floor Post mold - no pottery
Cultural modification - series of small progressive changes
Sig charro/cult corr w/HII
Changes sh till - A ecology? A cultural? Learn?
Dear major called all strait

Howland E sho Manemik Pol 5-8' asl small, spm filled pond
Not plowed (now)
Large # pond now 2'12 - 3'12' random, successive, overlapping
Patterm
Pass rocklinear p-liner 9'12 + 5' - dubious
Minlt
30 BP

Lagoon Pol Norton E, H - Huntington
1913 Guernsey - meager finds not of espeirl significance
1926 Douglas Byer & Fred Johnson Hornblower Shell heap
1'14 mi SE + HII SE corner Squib - 2 middown sequences
Squib cliff

MV - provides basic framework SNE + E Meas
CC - probab place of departure for most groups which visited MV

Pase 11,000 - rich big game - primary subsistence tundra
9000 - Pine, A in game capabill - low human popin, few elk
6000 - O-p+0-H - xerothermic - restored favorable conditions - esp to
most extra dur + turba;
4000 Squib - 4th etc
Swing of Sig abundance of shell - hard claim - Squib
Early adaptation to coastal environ; but knowledge for utilizaon of otle np. "Group newly arrived on the coast"
Assassins took with them for newly arriving groups to learn to catch soft clams in the bay scallop.

Squid - small open communities near seacoast or river self-suff - no evidence of fish.

Traditional - intro of shellfish

Correlates w/ NY Std

Vineyard polto - marks EW early "arrives on rel 4 C after CNY - probably land of MW - hunt, fish, collect new imp of fish

LW: "Corn and other cultivars were certainly an important part of the food of this stage. Which, on the coast, also included shellfish."

Native people of MW participated in cultivation of S/NF Paleo any 2 MA, etc.

"I believe, exclusive use of quahogs took on novelty of literal ending to those primarly forest-adapted hunters, esp. to Lauralhian groups who were the first to come to the island.

Progressive adaptation to marine environment

Earliest Archaic - Lauralhian tradition - 2370 BC - many forest-adapted"
"Corn was found in the latest dated horizon, but the appearance of agriculture on the coast at its interaction with the marine ecology remain to be elucidated. It is, however, manifest even from our limited data that significant demographic changes were associated with the rise of farms here as an inland elite in the same area."

Perennial residing over normal inland cycle of subsistence activities was ample shelter.
Dan Richter, 2001. Facing East from Indian Country

Heard mangled tales and received rare and novel items long before any known Europeans. Coxes took traps or snare or needle, Veeruma a young boy as proof of exploits and possible interpreter.

Verr - NE waiting will sure they know Europeans would want

Many wrecks and last cargo

1534 Carter St Johns - surrounded by 300 natives - ready to trade

bought 2 men to serve on return trip. Returns in year from Bilkay.

Beaver and goods shifted people from manufacture and artisan; stopped hunting except for beaver - so I need a good canoe

Changes power wealth and social dynamic. Large areas no beavers by 1640s

3 sisters: beans, A1 lysine, tryptophan + zein in maize - nutrient releases histin

with lime

Jacket Cover - Lasting of Henry Hudson - Robert Weir

Shows dark wills of River bluffs. Ship w/ full sails.

Indians on shore, canoes going out.
Williams could not notice or comprehend what influenced and sustained the Indian life. Only saw limited people - mostly men, public characters, articulate ones. Circle of contacts, not guide.

Arrived Mass 1631    Banished 1635    Providence 1636; Published
Key in 1643       A Key into the Language of America

Uses John White image of Secoton (NC) to illustrate a village - big fields, main avenue, longhouses, Quonset huts.

1524- Verrazano into Narragansett Ry - spent 15 days w/ Indians. Thu -> Casco Ry - Abenakis

Earliest account of NE Indians

Beautiful vs cruel; pleasant vs confrontational
Univ of Nebraska Press, Lincoln / ed. C.F. Feast.

1st Eskimos in Europe Netherlands 1567

Kidnapped by French sailors in Labrador

geneva met 1585

Frobisher - saw Eskimos - no contact. Found a box of nails in an Eskimo tent

Basque 1540-60s mostly Spanish some French - refer to region on N coast St. Strait of Belle Is.

as Terra Nova

By 1560s - more than 1000 Basque annually in 15-20 dhk for 6 mos - v. few returns to natives + contacts.

Frobisher - met Eskimos on Baffin Island in 1576-77

took 4 captives - took / note to home brought "new prey"

"Now with this new prey... the said Captain Frobisher returned homeward, and arrived in England

"the Captain desirous to bring some few from thence, of his being there" - *Loke 1577*

Frobisher looking for ore

Lewis W. Morgan mid 1800s - comprehensive study of Iroquois

League of Iroquois

Began or led to evolutionary theory in entire

"Unilinear Cultural Evolution"

1492 - En Spanish could off Nfl, possibly 3400 red fishes per day

Columbus

1004 Leif Thorvaldsson - Leif Eriksson - covery in Nfl

Examples of generalizations

Northeast Indians in Northeast "were primarily farmers"

"Warfare was a common, important aspect of Northeast culture"

defense of territory after Fair.

"Most Neatly groups practiced an economy that included both fish & h-

The os system employed a "deer butchery"

"For most of the year, many Neatly people lived in long communal

houses, often referred to by their Iroquois name, longhouses.

Case Study for Neatly - The Iroquois

"One of the best-known NAa groups is the Iroquois..."

"The Iroquois exercised great political power in the Neatly and even

influenced events on the world stage"

Towns - up to 2000 perp
As much diversitiy within subreg. as between
Champlain account - field w/ corn, squash, beans, tobacco,
fellow, fire, horses

Semi-ethnic villages
↑ LW - why? ① Pottery production - beast enwul - nuts + chowph
weaving - 1 fertilib ② climatic amelior 1000 AD - ↑ pastoral
↑ native conflict before Euro contact - discussed by experts

DD - NY 11 K BP Stew Island
Estuarine development + st-kilizike

Fishers Island 700 AD today - skills + all kinds of fish
P. Thomas, 1990 in The Maelstrom of Change

Fort Hill Hinckley fortified village 1663-64

Ind. tribes presumed as stable, well-defined, political units with
identified boundaries & leaders

Unstable, fluid, dynamic; several small sachems
tribes & febrile wealth

Map not frozen in time but fluid echos.

Bennett - maiz - 280-320 lb per person 50-60% calories

"maiz must be considered the primary staple food of the CT Valley
Indians from late September until May

400 people - 80-100 ac. yields much more with fallow
320-580 ac. more if unproductive 950-2230 ac.

+ periodic relocations

Ecological rationale for 2.5-mi spacing in CT

No fortified villages - missed by archaeos? As long common W of NE
SNE - 74,250 - 130,500 ac. under periodic cult over 4000 yr period
222,570 - 292,000 ac. if assume other factors

some competition for suitable land

Conflict w/ Euroes over plowing fields

rapid movement of Euro goods into interior

direct contact w/ Indians for goods by 1620
Traverse, M.A. 1933, The Wampanoag Indian Federation of the Algonquin Nation, Indian Neighbors of the Pilgrims.

Christopher Publishing House, Boston.

Neolithic people

Diorama - Bronson Indian Museum Athleboro

Under Sacusc Massasoit guided Pilgrims thru 1st years

ACV, MV, Narr Bcy - CC to S Mass Bay

Wampanoag - Coastal or Eastern Peoply

3 principal villages - Squanns (Warren, RI), Montauk (Mt Hope)

Kiekietut (Swansea, MA)

1st by Colonists - Edw Winchlow + Shipw Skepm 1521 to Squanns + Massasoit - claimed 20 villages wth his leadership

Wb Mass 1615 and 1616 by Narragansett

Latter tribes in Wampanoag - many already declined

Wm Penn + othersIndian similar to Swms, the Indian tribes

that roamed the wilderness of MA ensonred at least tribes of

Judah - Roger William based on similar Mosaic Customs

+ language Hebrew + Indian

"First American Human"

"Whoa ore of the Fobanoat contry as an expanse of wooded splendor

with hu and then a clearing or meadow around the various

villages of the aborigines and each village connected to th

others b a network of footpaths"
Within, open village, clearing + cult fields
  cone-shaped w/ 1 family to clear acre 20-100
Valley 2-4 ac.; woven baskets w/corn
Food - fish, fowl, game, corn, beans, peas, squash, ground nuts, berries, acorn
Corn or samp - meal + curritus
Stewfish - corn, beans + fat +/- fish
Clambake - shellfish, lobster, crab
Communal steam bath
Medicine - paid in wampum
Tobacco
Corn - dead herring in each hill; watch houses w/ kids
Women - set, planted, weeds + twine + crop
Each family - own plot - up to 2-4 ac. + weed + heat
plowed together + built some stonewalls
Seasons moved 6, plenty/ripe, fruits + nuts
Happy + gregarious
Moved villages seasonally, who flies placed them or chief did

Money - white + black wampum
Rights - corn, maize, nuts, dried meat, parched

Warriors + fishermen

"The whole Wamp lived an idyllic life but in the female waltz economy of..."
Many animals caught in heavy snow
Winter moved insolent

"...the Wampanoag tribe one as being a happy lot with a distinct custom, and very unlike the savages that generations of the unknowing have been led to believe."


Wm Allen Wall 4 x 7' painting Godamud w/ Wampas of Smoky Rock - New End Rd.
Commission 1842 - Old Dartmouth Hist Soc & Whole Museum

Verse "They live long and are seldom sick
Thorfinn's rock 'tween Mt Hope & The Narrows.

1619
Dermer rescued 2 French who had shipwrecked off coast &
cared for by N for 3 yrs

First Encamp - attack on Mike Stachel -
Samoset - from ME called for by Massasoit - learned E from
fishmen - knew Squanto who spoke印

1st T-Day Fall 1621 - Massasoit w 60-100 people - brought steps
1st Encounter at Nauset 3 days before Plymouth
scout persh from My flow
exchanged shot + arrows Aspinot

Samoset from ME - learned En. from Salem
described plagued + brought Squanto on 3rd visit.
Taken by Hunt in 1614 sold to slaves; released to
london when worked for Slainie
1619 back w/ Devn
Tought En. to cult corn + catch alewives
Sert gardns w/ fish
Jealous + schema for power
Played Inds against En
Massasoit would him killed so
stood close to En

Describes all 30 tribes

Maripe or still some claim depand

Josselyn describes MV - no permauney of Villages; 50 wi some
Sudden son

Nunpausne - on Gr Henry Pd - Maripe adopts
Takemy Inds on Great Tis Pd

Incl burial grounds - near Gr Light, Apsel's Nek, Mo. taimba Hill
Vasey records - Norse visited 1000 AD + Ver. S
Ed Harlow 1611 took Epanow + on slih
Epanow = osseone = En. told of odd + escaped on trip back
Last Remnants

1861 Mass. Senate Report - John Earle
"tastes of interbred ws negroes"

1861 Wamp Census

Chappa Tribe 74      Gilded Tribe  204
Church Town 55       Deep Bottom  13
Narragansett  405     Dartmouth  111
Hast Rd  67         D.
Falmouth  78
Middleboro  7

"As was destined; ... the so called Indian Reservations and Reserves soon came to their inevitable closing, and the Indians as a group no longer existed in Mass."

e.g. Fall River - level to Water Supply

"So must too, meet the fate of the other groups of Indians, descendants of the once Powhatan Wampanoags, Federation of the Algonquin (Ind. Nation)"

Last chapter of book on Amosco - provides a metaphor for
"symbolic moment of the capitulation of our culture to others"
hand symbolic and literary of Twh to his capt. Capt. Bajichel
"final act of submission as a tribe"
placed a bundle of tobacco with broad accordion balf of R

"
Wampum will be for + events of tribe "Holy Eucharist" or "Torah" of the lands + belt will moose hair; Tomato of Wolf
1676 in 1677 shipped by Gov. Joseph Winlow to King Churkell

Belt 9" x 5"
Took Anawon captive - later head cut off

"Then, in this last chapter, the reader has the story of the last official act of submission performed by the Wamp as a tribe. Have both they ever no longer a subdivision of people, with a purpose or leaders."

"Remnants of these tribes who did not submit to the colonist wandered as refugees to the north lands and to the west and were absorbed into the tribes of the Algonquin brothers who later were persuaded to aid with France against the Eng. Villages to the North."

"The white men's breed was left intact in the Potomach of Cowsh where it flourished and prospered."

Various Deeds
The Remnants of the Race

18th c wigwam disappeared, small remnants and refuge groups sent to reservations

"Thus, the Wamp Indian was driven away from home, and in many cases became so involved in pursuits that contact with family and friends was lost forever."

Earl report works of State: "Chappa, Christian town, G't, Marshpee, King Pel + Troy of Fall River.

"There is not one person of unmixed Indian blood" intermittent white + black

"Foreign blood early introduced too permeate the whole mass"

"lost their identity as a distinct class"
more negro than white in most - unfortunate

"The mass appear to have sunk into that state of constrained apathy"
Towton River drainage - a big, conve area

Ponanokeet Wampanoag dwindled after King Philip was on both sides. These groups the English were banished. Allies into praying Indian town.

Many converted to Christianity - some to Eur. cultural habits

Conforti - Wampanoag Woodlands

Fall River Indian Res

Singly successful whaling season could cover cost of vessel + profit.
Sailed in spring - as early as early April.
Pursued whale in shallows.
Mid Sep = severe weather - caught overwinter 1574-5 1576-7.
Preferred spp. - Baleen whale = right whale - slow & flooted.

1977 Tuck went than w/ Bartham + Wilks Kenyon from Ontario museum
found fluke, blubber, overused wales, glass etc.

Sidehill Island

Low wet areas - excellent preservation.

Big piles of whale artifacts - bones etc.

Prehistory floors smooth, despite appearance of breaks
Paleo-prob not mastodon but caribou, fox, bear
exploited coastal resources in late sp to earl full
fish, birds, seals, other mammals, shells
But ewa later people w/ big shell mounds - exaggerates imp
of shellfish-oth food more imp
After 10 BP - only scant traces for thousands of yrs
>5000; some suggest pine forest inhospitable for animals
+ humans

Late Archaic
Late Pr-Carovic - 1st abundant evidence of human habitation >5000 BP
LA - known as first hunt but even when this is true little & in
hunt-gath. likely
Why >5KBP unknown - pass due to wind poorly know - from NE
Bringing Luereshean People

Mainstay - deer or moose Beaver incisors - sharp wind; in van
Maritime Archaic - abalone, wood works - axes, adzes, gauges

Disappeared 3500 BP

>3500 - Gulf of NF - drop water 70° - swordfish. D. Sauger - drill
to 1 sea level, cold water into gulf

Clay pots - from S - improved cooking; may have allowed some new
foods; but bulky to carry + heat, less so in some areas peop

grow up clay pots + reverted to traditional woven, leaf containers
( cult - near St. John P. just before Env arrived
no evidence of previous occupation - times
Haphazard operation - crops below lights;

Pit houses - dug in 50cm - otherwise like usual

Grass surface - Possums probably went

Site changes just before contact - abandoned go-rural coastal
villages into summer coastal - due to enemy & other factors
Summer coast residence poss due to Ear trade & fishing

Pit houses replaced by coastal Wigwam
Abandon clay for birth

Middle - good preservation due to arfshin enviro

Micmac - relatives homogenous 2000 BF -

Barrows - oval stone homolithic - red ochre - badin glob

1584 Jacques Cartier's voyage of discovery - met a French fishing vessel in Lab Harbor

1560-70s Red Bay 1000 mw 5 mo. Whaling season - up to 500,000 quals with oil per yr; one ship 50,000 gallons

Beebe Huxley Borkham persuaded Tuck + Gromer to explore moved from Canada to Spain - learned Spanish

\[ 26' \] wt. 6 thwarts

16th Basque chalupa - whaleboat - couldn't withstand Nantucket sleighride put chalupa on line - follow whale until lured to death towed to shore

Tryworks - operated 24 hrs - preserved 30' long; 6 huge cauldrons

12 Basque whaleports - Red Bay most active - Islands used w/ lee side for tryworks + cooperages

Borkham - great compilation of great records - people's names, sailors, cargo, whales

Red Bay gardens filled w/ red tile; hard black covering on eton wall - blubber; coopers on shore; oaks; preassembled

Indian artifacts - unclear if trading or scavenging off season

Cemetary - 125 mw 20-40s; died whaling; some during winter

3 masted 225-300 ton - 50; long; workhorse / founded 1978 / Center

Seal Suet - Basque gallon \( \sim 1565 \); at anchor; \( \sim 55,000 \) gallons. oil

Borkham's archival work pointed it

Oil - lubricant; light; soap; additive to drugs

1 barrel = 2050 annual salery of carpenter

much of gear + 1 half of cargo salvaged by crew & stern
healed swnts

Saw 1000 - 10000 barrels; ready to sail home
barrels floated - pulled off pales
astrolabe in one ship

Basques several hundred breeders stock of whales - just as did to
own whales in 15th C
Killed >15,000 whales off US in <50 yrs - may how contributed to
right whale endangered status
Also - whaling more hazardous - more freeze-ups over him
Spanish Almod 1500 - absorbed ships + men

Basques - unknown origins - not Fr or Spanish ethnicity
lived crest of W Pyrenees between F + S - Bay of Biscay
at least 5000 yrs; language + blood - distinct people
aided Columbus, Magelhans + Belivar was Basque
James A. Tuck. 1988
Wet site archaeology at Red Bay, Labrador
Wet site archaeology

1579 - Eng closed ports to

Baguette whale oil + wine

Streets = resource funnel for new spp. + attracted new people

Early 1500s cod fishing = whales

1500s Baguette run down

1530s each spry = > dozen S Labrador harvors

Tuck = stored 1597 Selma Barthom Archival material

Buitres = Vultures

Red Bay = Buites, Buitres harbor

Parks divers - 3 large whale ships + small pinnae
+ crew smaller whalers

cold water + reliable accumel. A

Some of best in world

Some stations around RB mid 16th - 17th C.

>15 j wharves for fleshing whales
try works - shown structure built Cauldrons

Cauldrons - lined then w/ comfort life
crew living quarters

Last 16th C - industrial scale whaling

up to 1000 whalers at Red Bay annual peak w/ >1000 spott
also S Labrador

Both hunt + Ind material in context w/ Buitres

Seasonally visited abandoned camps for goods

One bog burial = clothes
Encyl Canada:

- Sunked boats or ships before whales could be
- Coulhrons hunted to blubbe from which oil removed
- Oak and beech casks
- Lookouts - substantial to spy whales

Cemetery > 140 people

1565 San Juan del Pastoys sailed in storm with 1000 casks

Staves from Brittany, casks built like Bordeaux & channeled to
- Bajan Town; tarred, heated & filled w/275 liters oil

4 other whalers

1572 Anthony Parkhurst - 350-250 vessels - 150 Fr, 100 Span, 50 Peso, 30-50 Eng, 20-30 Basque whalr.

French 2200 v. 1/4; peso 500 10-12,000 mw

Naid fishing "was one of the two major areas of French activity in the New World"
befor 1580 - two good records of trade as strictly scal + fishes,
1580-1600 6 ships with 1584-85 far trade in Basque.

(oint whale, salmon + trade.)

Whale stokes in Straits Bally leve-uplifted 1570s so switched to Fur and up St L

Habluy + - 5 St Melo vessels - returned 1584 w/ furs - v. prof.

"trade below & other vessels on the coast from the 1540s on, but it only became a commercial venture into second half of the century."

1582 - large quantities of knives of different.

Copper knives - major item, nearly pure copper.

1584 Michau de Gharsasbal [merchant of Basque vessel Marie de Saint-Vinu],

Paternostre (beaded objects)

1212 1/2 of kettles w/ 100 of real copper, 1532 Enivet, 150 cases, brats

Swords, + cloth for Canadias naitives 50,000 glass beads

1586 - 209 kettle 1587-208 cases also fished.

1586 - mentions 10 barrels of pelts of many sorts.
Copper kettle: freq in Basque - not Norman. Florida trade.

1565 - Fr ship in La Rochelle for Fla - bracelets, rings, mirrors, bells, earrings, scissors, bells, knives, axes, + pins, needles - sewn goods. Finished + unfinished goods.

1542 - Clemence de Odelicor - "Gran Enfe" - exchange of deer + wolf skins for axes, knives + other trifles.

Indian Thanksgiving Paintings:

L.G. Ferrie. The First Thanksgiving

Jeremie Brownescombe, 1914. The First T of Plymouth

Wampanoag, known to neighbors as Pocanoket, "place of clearing"

From Bradford, Williams, Winthrop - Primarily farmers, but also hunt, fish, gather. Farming now.

Wamp on CC, MV, Ack - relatively untouched by King Phillip's War.

2 cultures - God Had + Mashpee

Martha Simon - Fairhaven, MA area - last Wampanoag

1857. Albert Bierstadt + visited by HST
L. Weinstein, 1994, Enduring Traditions

SNE = LI 193 people / km² horticulturalist w/ supplemental activities
allowed near annual cycle
Earl Ind rich for trade, vies w/ each other
Carbo rich nuts, ocean, butter, black wint, bark, chest, hazel, hickory
shall, povit, root & probably curums, meals, pans, sars, oil, - food+flour
salts, ointments, vinegars

cultural + geographic

Block 1 voyage 1614-1615 enormous mapped into 1610 Velasco map
from Hudson 1609-10 and Block 1614

Block - CTR fortified village - may be due to Iroquois raids - as none of
before the act to McBride

No trauma deaths precontact - SEE CONFLICT follows trade
Materials in refit all from Wiin hundreds of yrs.

Narr: B. Bernstein 1990 - complete absence corn, beans, squash despite
Narr oral tradition + 16th + 17th records - familiar with corn but
not a critical crop

Bernstein NE - mesolithic site again, 1000 BP, sedentism w/ Ag.
possibl + chas/packed coastal pop'n
Sedimentary & peace assume Indians gone or assimilated - still yrs.
Wiggesworth Obiluan - Memoria\nCharles Palache 40  Friend from college on

May 6 1945  E-18865  7th EW
1904 -> HU  Geology 1906 1908
1910 Curator Giffenher Collection photograph 7 yrs
1911-1915 assistant in Woodworth's course

PhD 1917 on MV

1919 Director of Museum - NE Museum Nat. Hist.
1940 Emphasized local minerals
Geology - Am Gem Soc. etc.
1952-1972 Gemological Lab. America

Great Illustration
No mention of Croam

Quasi revolution 5000 BP - stone bowls, woven baskets, arrowheads

Adena tradition - brought knowledge of pottery and revolution in vegetable - maize. By 300 AD - whole new culture - *Ceramic Woodland Period* - "Algonquin"
Squaw - back bone - pottery, farms, sizable villages grew up, cleared fields

Rarities due to reacts - geologic, - so built stockades
Men became warriors - bloody course of destruction

"Long before the first white settler came to New England, shows intertribal wars were tearing apart the very fabric of Algonquin life."

Long houses used in winter
Ceremonial houses to 200 feet

Villages - are size 100 tribespeople

Wives were clustered around open central space

Fortified villages - Willoughby, 20 - squashed in 1655-1656

Countryside - quote Morton - burn barn a year
Loose-knit happy + easy-going days of Lt. Archibald People were over
Perhaps Helena from an introduced their highly developed
social levels to NE
↑ Popn + wealth
Family, Clan, Class, Tribes (numerous village)
Tribal Council: Band

Distinctively NW & NE Tribes
N - Short chase on summer warmth
so all emphasis on hunt, fish, gather
seasonal shift

W Abenaki - had Ag - moved every 10 yrs to defensible properties
all w/ shocked by 1600

SNE Life - no longer depended on good fortune in hunt, fish, farm
Dry & preserve food, no need excessively season stores. Settled around
celder, each semipermanent village - longhouses w/ protective shelter
Pequot fort 2 ac 400 people + some wigwams 20 at
Wealth of crops - attractive outdoors
move every 10 yrs

Pocumtuck - had Deer Island - fixed 20 mi hunt land so thorough - clear could
be spotted 4 mi away + fields for clean
Many w/ gardens 200 miles from village
Winship, G.P. 2010 (1905)
Sailors' narratives of voyages along the New England coast
1584-1624, General Books, Memphis TN

David Ingram, companion of Sir John Hawkins. Took refuge in storm. Slave trading ship attacked by Spanish in Mexico. Not Gulf, 100 men cast on shore, 3 walked to E Me coast picked up by French fur trader near Cape Breton

Gosnold 1602 Ship - The Concord

refer to Calvin Martin 1978 Keepers of the Game. wonders how had broke sacred covenant w/ animals - proposes Inds blamed animals for diseases

Does fur trade undercuts environment of Indians

Wilbur Jacobs "I am convinced that Indians are indelible conservators. They were America's first ecologists."

through fire, sustenance - grown beans + corn balance of nature

51 Began computis eliminated NY - 1640