

US EPA ARCHIVE DOCUMENT

LAKE CHARGOGGAGOGGMANCHAUGGAGOGGCHAUBUNAGUNGAMAUGG

Webster, Massachusetts

Popular Translation: "You Fish on Your Side, I'll Fish on My Side, Nobody Will Fish the Middle"

(Literal translation: Englishmen and Nipmuc Indians at the Boundary, or the Neutral Fishing Place)

CHAR-GOG-GA-GOGG-MAN-CHAUG-GA-GOGG-CHAU-BUN-A-GUNG-A-MAUGG



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D.J. BASSETT
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UNDERSTANDING THE PAST

In the exploration of the past we enlighten our future.

Pre-Columbian Freshwater Fish in New England

An Archaeological Approach

Dr. David Halliwell, Fish Biologist II

Maine Dept. Environmental Protection

&

Dr. Arthur Spiess, Senior Archaeologist

Maine Historical Preservation Commission





Maine's Native Indigenous Freshwater Fish





1978 – 1478: 500 Years

FISH PROBE—Officials from the state Department of Fisheries and Wildlife collected fish specimens Wednesday from the Hoosac River to check for traces of the toxic chemical PCB. Here Richard Keller, left, conservation

helper, and David Halliwell, assistant aquatic biologist, use electro-shock probes to stun fish for collection in a section of the river off State Road. (Transcript-Noyes)



FISH-PRIZES?

Fish Origins - Definitions

- **Native** – naturally found within a geographic region prior to arrival of the first European settlers (**State of Maine: 1524 - early 1600's**)
- **Indigenous** – a native resident fish species which is naturally found to inhabit any particular drainage system.
- **Freshwater** – inclusive of diadromous fish species (e.g. eel, salmon, striped bass, alewife, shad, and lamprey)



Ancient Native Peoples

- *Pre-Historical*
- *Pre-European*
- *Pre-Columbian*
- **Maine** = 17th Century (1600's)
- **Artifacts** – *created by humans*
- **Ecofacts** – *naturally created*



3,000

Yrs old



Maine Precontact Artifact Timeline

Paleoindian period



Artifacts are shown 50% of original size when poster is 22 inches wide

Late Paleoindian



Archaic period

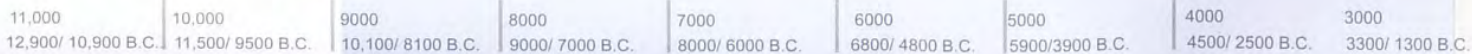


Susquehanna tradition

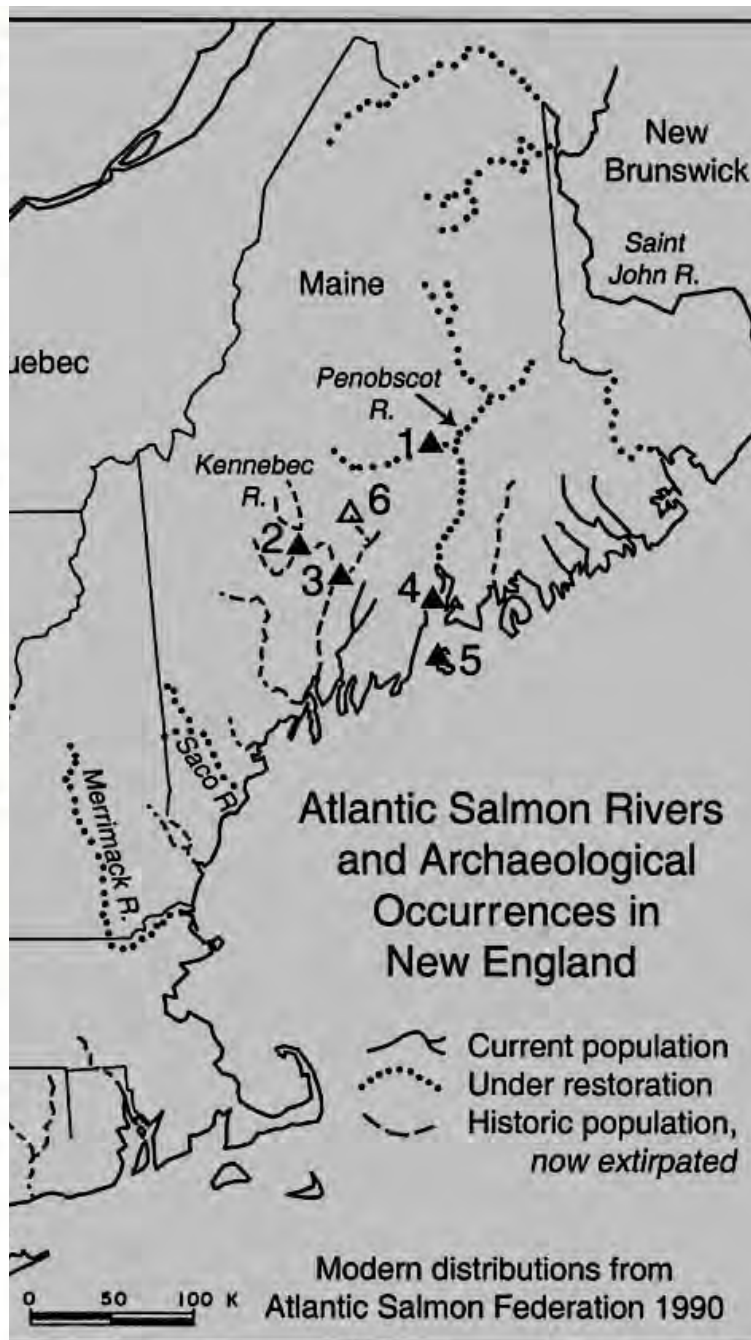
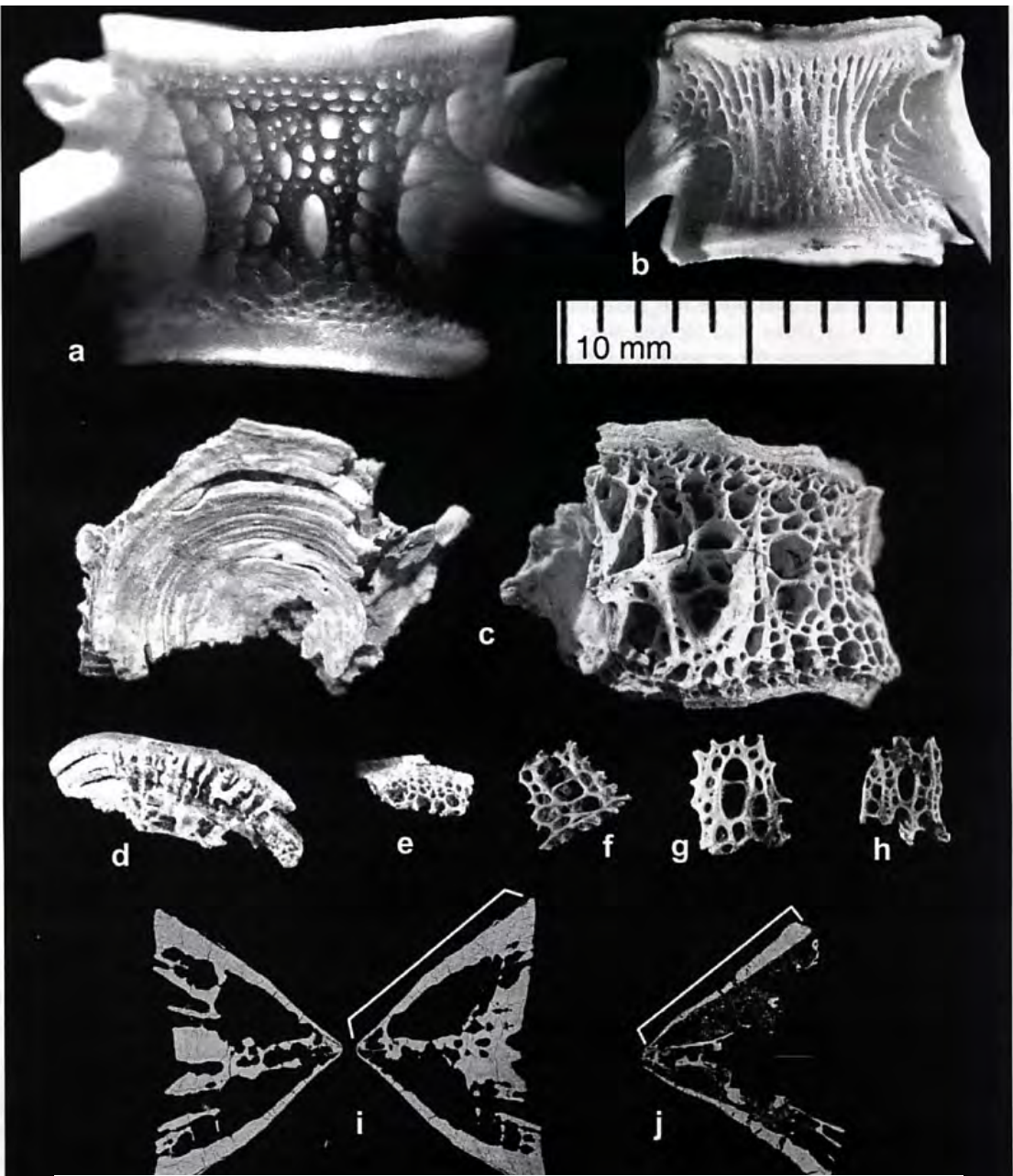
Ceramic period



RADIOCARBON YEARS



CALENDAR YEARS



CERAMIC Period

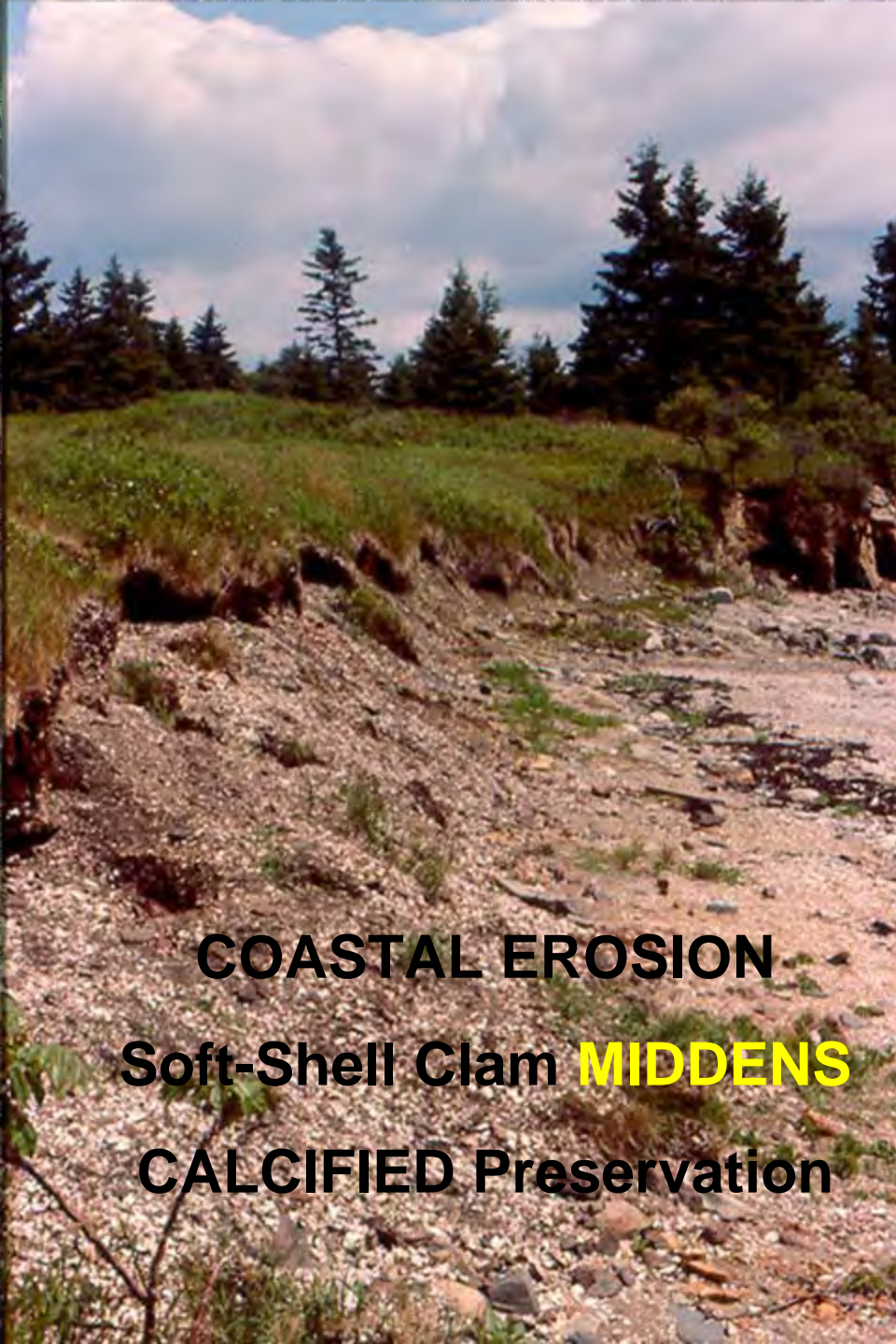


Preserved 'burned'

Calcined fish bone

FRAGMENTS

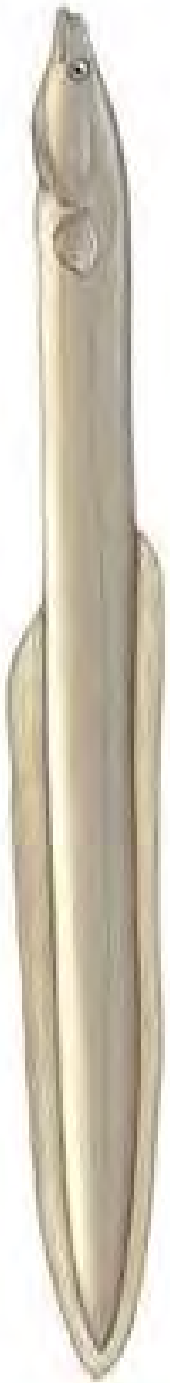
3,000 - 500 Years Past



COASTAL EROSION
Soft-Shell Clam MIDDENS
CALCIFIED Preservation



Coastal Primitive Fish



Shortnose sturgeon



Atlantic sturgeon

American
eel

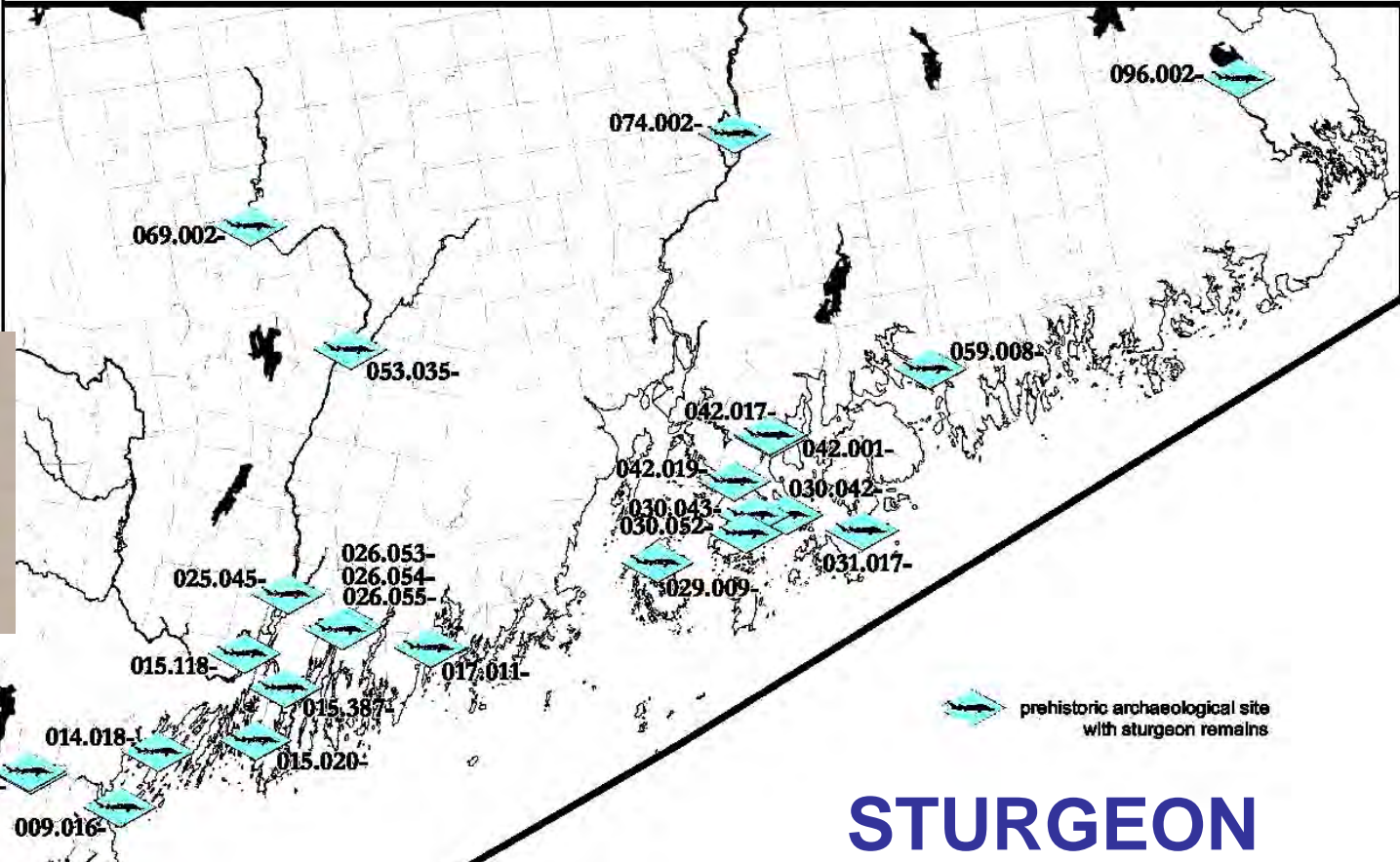
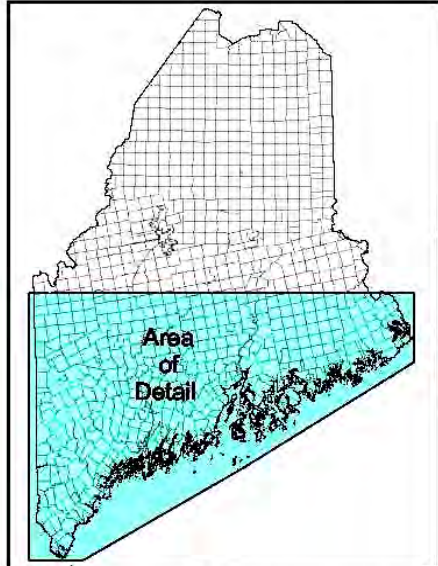


Sea
lamprey



Native American Archaeological Sites in Maine with Identified Sturgeon Faunal Remains

Non-preserved cartilaginous skeleton



Bony
Armor
Scutes



STURGEON

Data provided by
Maine Historic Preservation Commission
February 2010

map by

Liz Trautman

Atlantic tomcod – Codfish family (Gadidae)



VERY POPULAR FOOD FISH of NATIVE PEOPLES

Diadromous Fishes

Fish Species	Coastal Sites		Riverine Sites	
Sturgeon (2)	26	32%	21	35%
Atlantic tomcod	28	35%	0	--
Alewife	13	16%	5	12%
Striped bass	11	14%	6	14%
Atlantic salmon	3	3%	8	18%
American eel	0	--	4	9%



Coastal Bass-'Perch'-Herring



Striped bass



White perch



Alewife – River herring

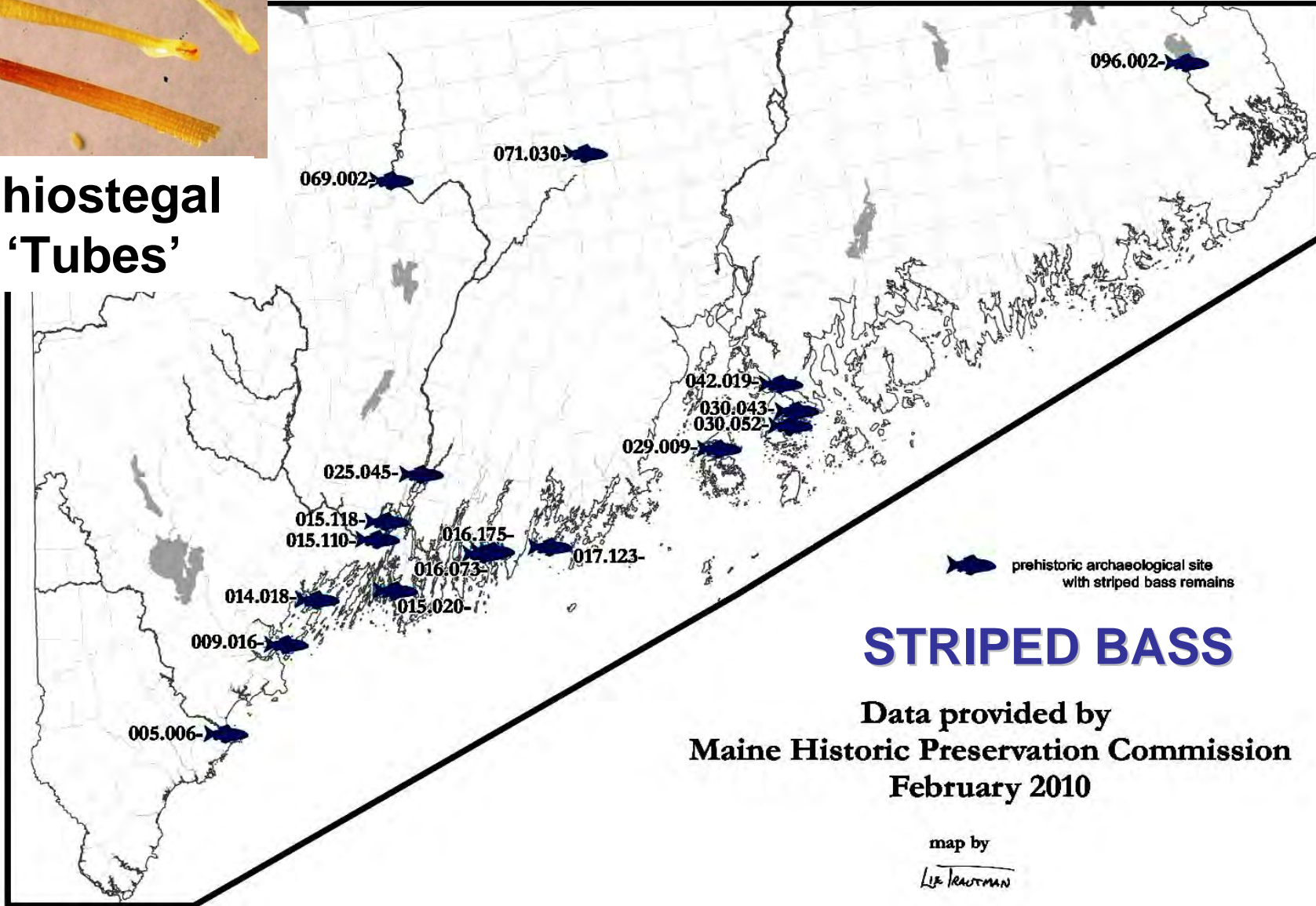


American shad

Native American Archaeological Sites in Maine with Identified Striped Bass Faunal Remains



**Branchiostegal
Ray 'Tubes'**



STRIPED BASS

Data provided by
Maine Historic Preservation Commission
February 2010

map by

Liz Lewman

Indigenous Salmonids - Char



Atlantic (landlocked) salmon



Lake char = **togue**



Brook trout or **char**



Arctic char (below)

Indigenous **Coldwater** Fish



Freshwater cod = Burbot = **cusks**



Lake and Round whitefish



Fallfish or “**River chub**”

Indigenous Suckers



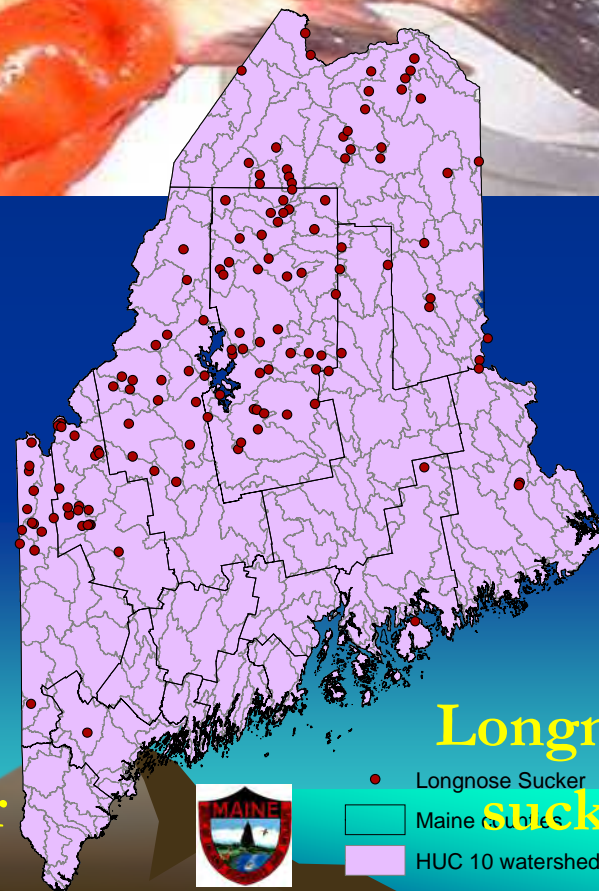
White sucker



Longnose sucker



Creek
chubsucker



Longnose
sucker



- Longnose Sucker
- Maine Counties
- HUC 10 watersheds

Indigenous **Warmwater** Fish

C
H
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Brown bullhead or "Horned-pout"



Pumpkinseed (sunfish)



Redbreast sunfish



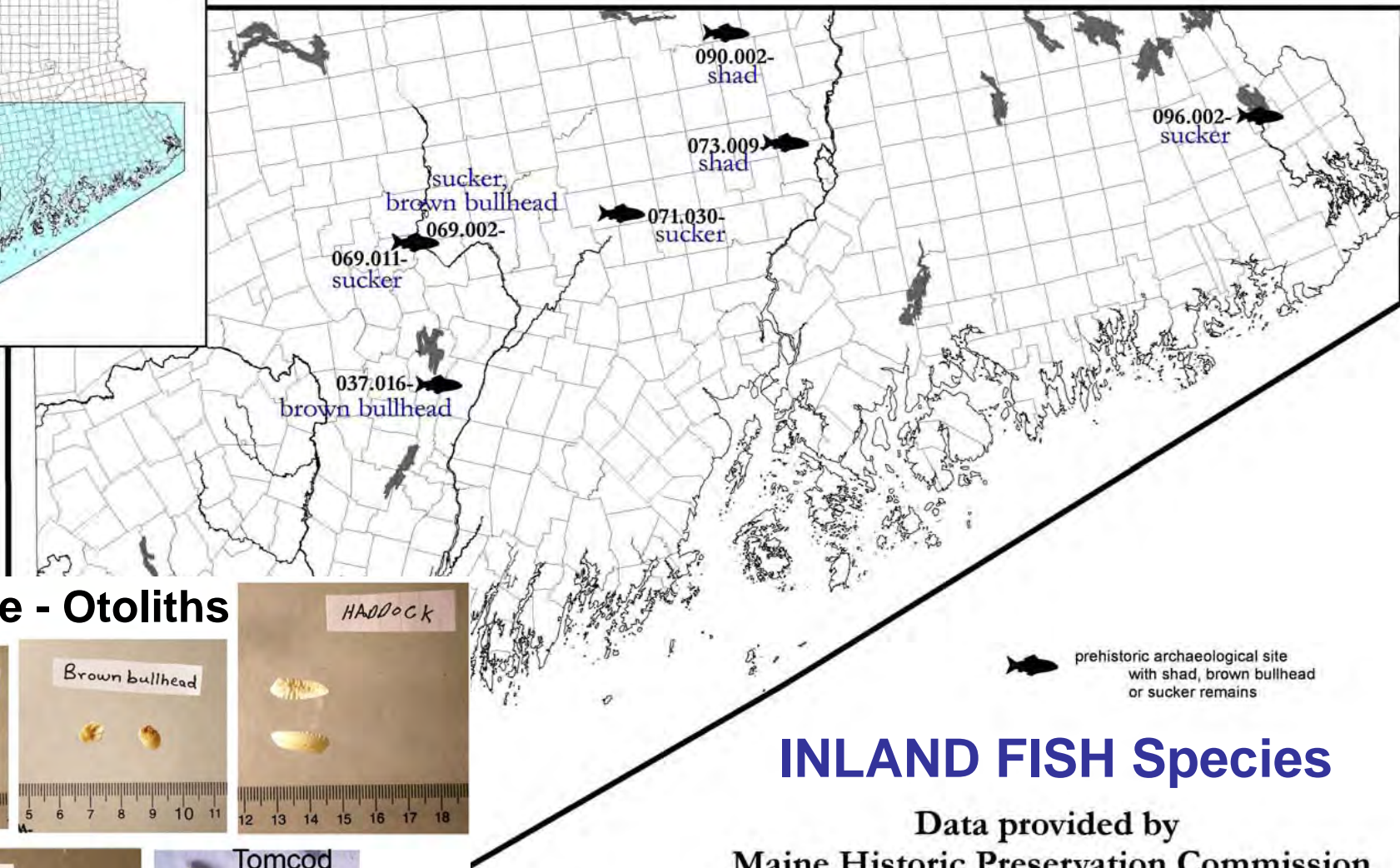
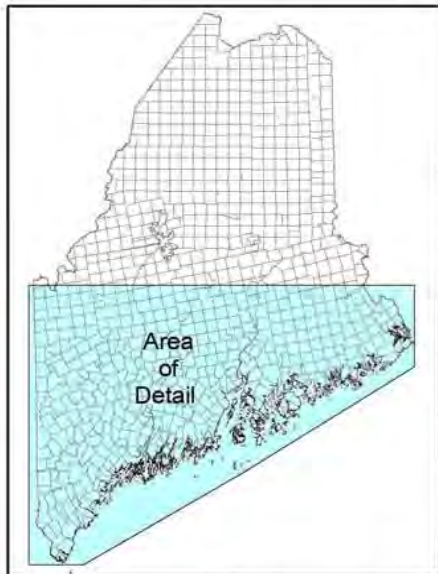
Yellow perch

Inland Freshwater Fishes

Fish Species	Coastal Sites		Riverine Sites	
(American shad)	0	--	2	5%
White sucker	0	--	3	7%
Brown bullhead	0	--	2	5%
Yellow perch	0	--	1	2%
Lake char/trout	0	--	2	5%
Arctic char	0	--	1	2%



Native American Archaeological Sites in Maine with Identified Shad, Brown Bullhead or Sucker Faunal Remains



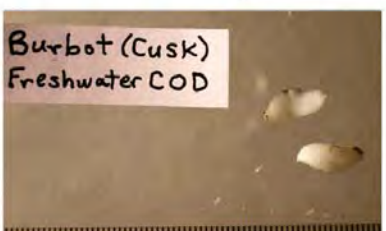
INLAND FISH Species

Data provided by
Maine Historic Preservation Commission
February 2010

map by

LIE TRAUTMAN

Ear bone - Otoliths



New England Aboriginal-**Fish Place Names**

- **Damariscotta** “many alewives”
- **Cobbosseecontee** “many sturgeon”
- **Oquossoc** “place of trout”
- **Winnisquam** “salmon fishing place”
- **Quinsigamond** “pickerel-fishing place”
- **Androscoggin** “place where fish are dried”
- **Skungamug** “eel-fishing place”



Currently in Development

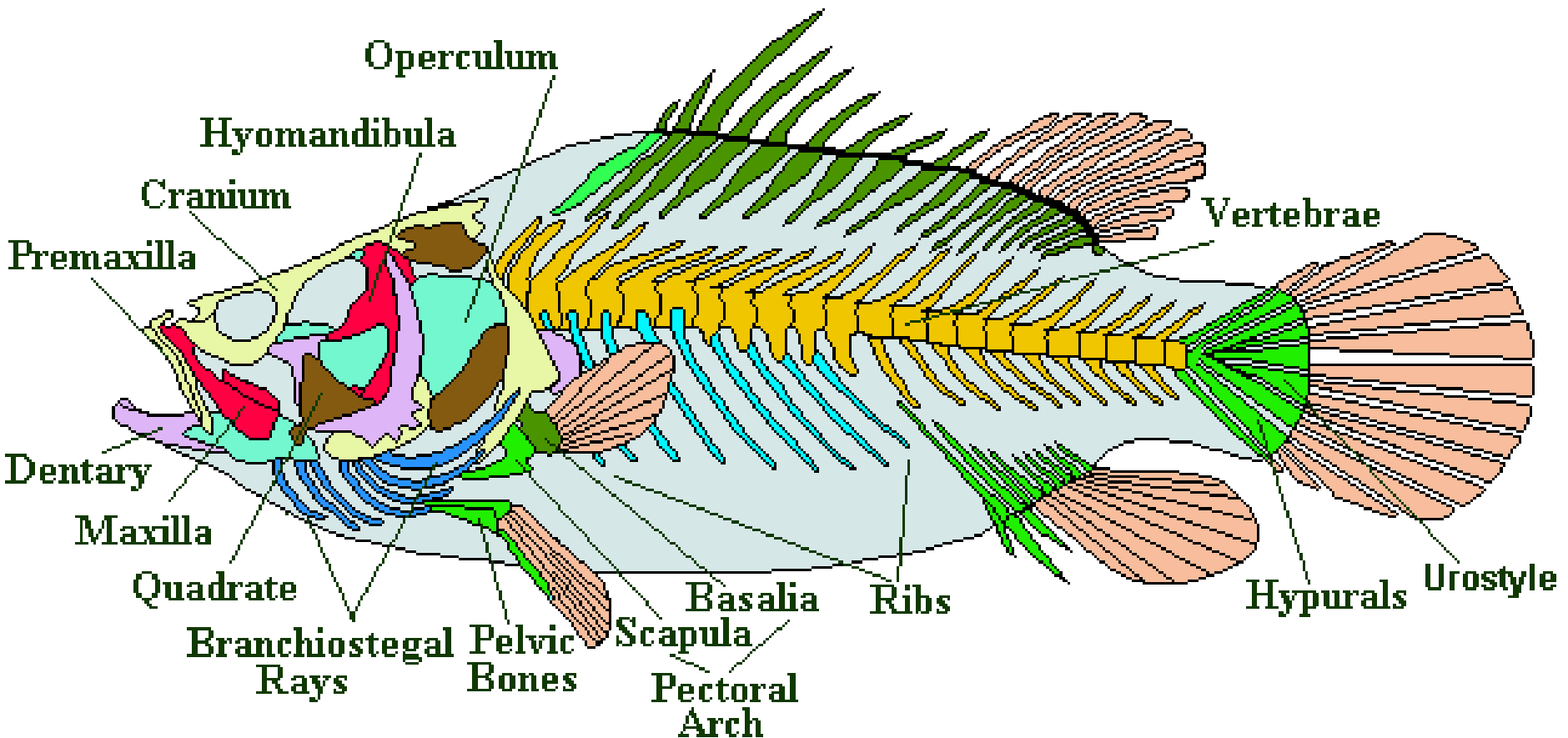
An Ecofactual Key to **Pre-Columbian** Northern New England FISH Remains

- 1a **Inland** site – **burned** (calcinated bone)
- 1b **Coastal** site – shell heap **middens**
- 2a **Cartilaginous** fish (**scutes** or teeth)
- 2b **Bony** fish (**vertebrae centrums**, spines)
- 3a Ear bones (**otoliths**); gill (interhaemal)
- 3b Pharyngeal and mandibular **teeth**

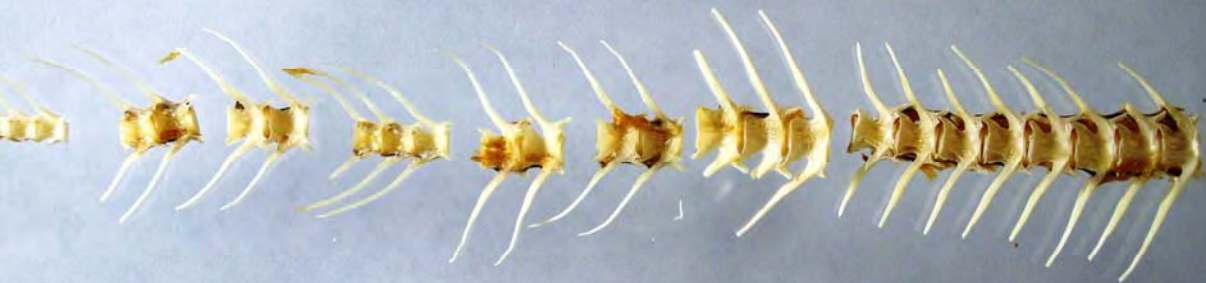


FISH Reference Conditions?

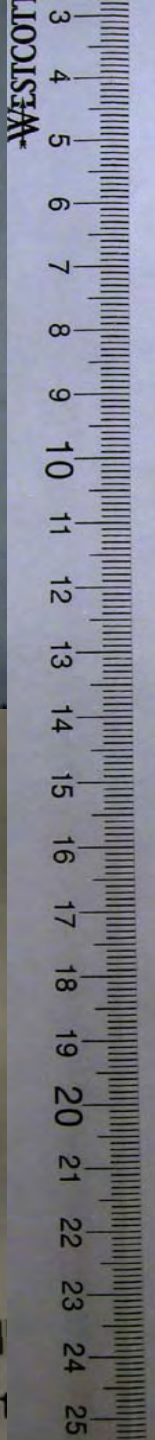
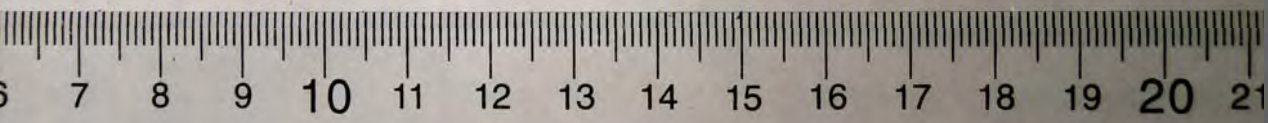
A Generalised Bony Fish Skeleton



Burbot (Cusk)
Freshwater COD



Brown bullhead



Chain pickerel



Actual Fish Remains - BONE



WINTER FLOUNDER



INTERHAEMAL BONES
Gill Arches
Pectoral Fins



VERTEBRAE – Centra



DORSAL FIN SPINES



Site: 44.26 CAT# .526
description: cod - lg. 30-50
R. rexox



Cod OTOLITHS

Cod PREMAXILLARY

VERTEBRAE



ANY QUESTIONS?

