



Smithsonian
2012
**FOLKLIFE
FESTIVAL**

CAMPUS AND
COMMUNITY

CITIFIED

CREATIVITY
AND CRISIS

June 27 to July 1
and July 4-8

On the National Mall
Washington, D.C.

FESTIVAL.SI.EDU

2012

The Smithsonian FolkLife Festival



June 27 – July 1; July 4 – July 8

***Celebrating the 150th Anniversary
of **USDA** establishment and the
Morrill Act that established the
**Land Grant Colleges and
Universities.*****

Oregon State University

Surimi School

Seafood Research and Education Center



School for Fish

That crab-flavored seafood in your salad or California roll? Chances are the people who made it learned how from us. Oregon State University food scientist Joe Park pioneered processes to turn low-value fish into high-value surimi. Since 1993, Park has taught production and food safety techniques at annual Surimi School sessions in Oregon, Asia and Europe.

Oregon State University Seafood Specialist Joe Park has learned how to make a higher value product from low-value fish.

1

Surimi is made from plentiful stocks of Alaska pollock and Pacific whiting.



The fish fillets are deboned and minced.

2



3

The minced fish is thoroughly washed and the water pressed out.



The fish parts are mixed with stabilizers and frozen in blocks. It's now surimi!

4



5

The surimi blocks are mixed with other ingredients and an electric current is used to further process it to make crab sticks, suribago and other seafood.



oregonstate.edu



NATIONAL MUSEUM OF AMERICAN HISTORY



NATIONAL MUSEUM OF NATURAL HISTORY



Washington Monument



Capitol

Madison Drive NW

12th Street



Oregon State Uni

CITIFIED

- Information icon
- Food & Drink icon
- Water Station icon
- Audio Loop icon
- Community Barbeque
- Azerbaijani Food
- Panorama Room Performance Stage

CAMPUS AND COMMUNITY

- Information icon
- Food & Drink icon
- Water Station icon
- Audio Loop icon
- Morrill Performing Arts Center
- Campus Cafe
- Smithsonian U
- Family Activities
- Reunion Hall
- Univ. of Illinois
- Texas A&M

CREATIVITY AND CRISIS

- Information icon
- Food & Drink icon
- Water Station icon
- Audio Loop icon
- Red Hot Performance Stage
- Southern Comfort Food
- 2362 Market St.
- Common Threads
- Quilt Volunteer Check-in
- Quilting Bee
- Univ. of Tennessee Solar House

THE AIDS MEMORIAL QUILT

- Information icon
- Food & Drink icon
- Water Station icon
- Audio Loop icon
- Readers Stage
- Reader Check-in

14th Street

- Water Station icon
- Fresh Fruit/Beverages icon
- Information icon
- Audio Loop icon
- Good Hope & Naylor Corner
- Mural Installation
- Douglass Hall

- Information icon
- Food & Drink icon
- Water Station icon
- Audio Loop icon
- 1994 Tribal Colleges
- West Virginia Univ./Univ. of Texas-Pan Am
- Univ. of Hawai'i
- Mortana State
- Iowa State
- REINVENTING AGRICULTURE
- LANAI
- TRANSFORMING COMMUNITIES
- Goats
- Garden Complex
- Test Kitchen
- Michigan State
- The Commons
- 1890s Historically Black Colleges and Univ.
- Univ. of Vermont/USDA
- Univ. of Missouri
- Univ. of New Mexico
- Univ. of Maryland
- Indiana Univ.

- Water Station icon
- Fresh Fruit/Beverages icon
- Information icon
- Food & Drink icon
- Volunteers/Lost & Found/Accessibility icon
- First Aid icon
- Media icon
- Kids Create!
- Giving Voice
- Healing Arts
- Call My Name
- Remember Their Names



SMITHSONIAN CASTLE

Jefferson Drive SW

12th Street



U.S. DEPARTMENT OF AGRICULTURE

USDA People's Garden

MARKETPLACE

- Information icon
- Food & Drink icon
- Water Station icon
- Fresh Fruit icon
- Beverages icon
- Audio Loop icon
- First Aid icon
- Media icon
- Volunteers/Lost & Found/Accessibility icon
- Toilets icon

Oregon State University

Surimi School

College of Research and Education Center



School for Fish

Learn how to make delicious fish dishes with our expert chefs. This hands-on course is perfect for anyone looking to improve their cooking skills. The course covers everything from basic knife skills to advanced techniques for preparing fish. You'll learn how to select the best quality fish and how to cook it to perfection. This is a great opportunity to learn from the best in the business.

1



2



3



4



5



oregonstate.edu



The Great Wave Basin

Learn about the history and science of the Great Wave Basin. This interactive exhibit features a large-scale model of the basin and a video explaining its role in the region's economy and environment. The exhibit is designed to educate visitors on the importance of the basin and the challenges it faces. It's a great way to learn about the science and history of the basin in a fun and engaging way.

Surimi School

Seafood Research and Education Center



School for Fish

That crab-flavored seafood in your salad or California roll? Chances are the people who made it learned how from us. Oregon State University food scientist Jae Park pioneered processes to turn low-value fish into high-value surimi. Since 1993, Park has taught production and food safety techniques at annual Surimi School sessions in Oregon, Asia and Europe.

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The surimi blocks are mixed with other ingredients and an electric current is used to further process it to make crab sticks, scallops and other seafood.



OSU Surimi School was invited to the 47th FolkLife Festival to help: General public understand

- 1) What surimi and surimi seafood are,
- 2) How they are made, and
- 3) Our fishery resources used for surimi production, **Alaska pollock and Pacific whiting** are **the two most sustainable white fish in the world.**

Sustainable Solutions section:

Surimi School

For nearly 20 years, Oregon State food scientist Jae Park has taught production and food safety techniques at annual Surimi School sessions in Oregon, Asia and Europe. Park pioneered processes to make surimi seafood that's low in fat and cholesterol from abundant fish stocks, helping revitalize North Pacific fisheries.

OSU Surimi School Participants

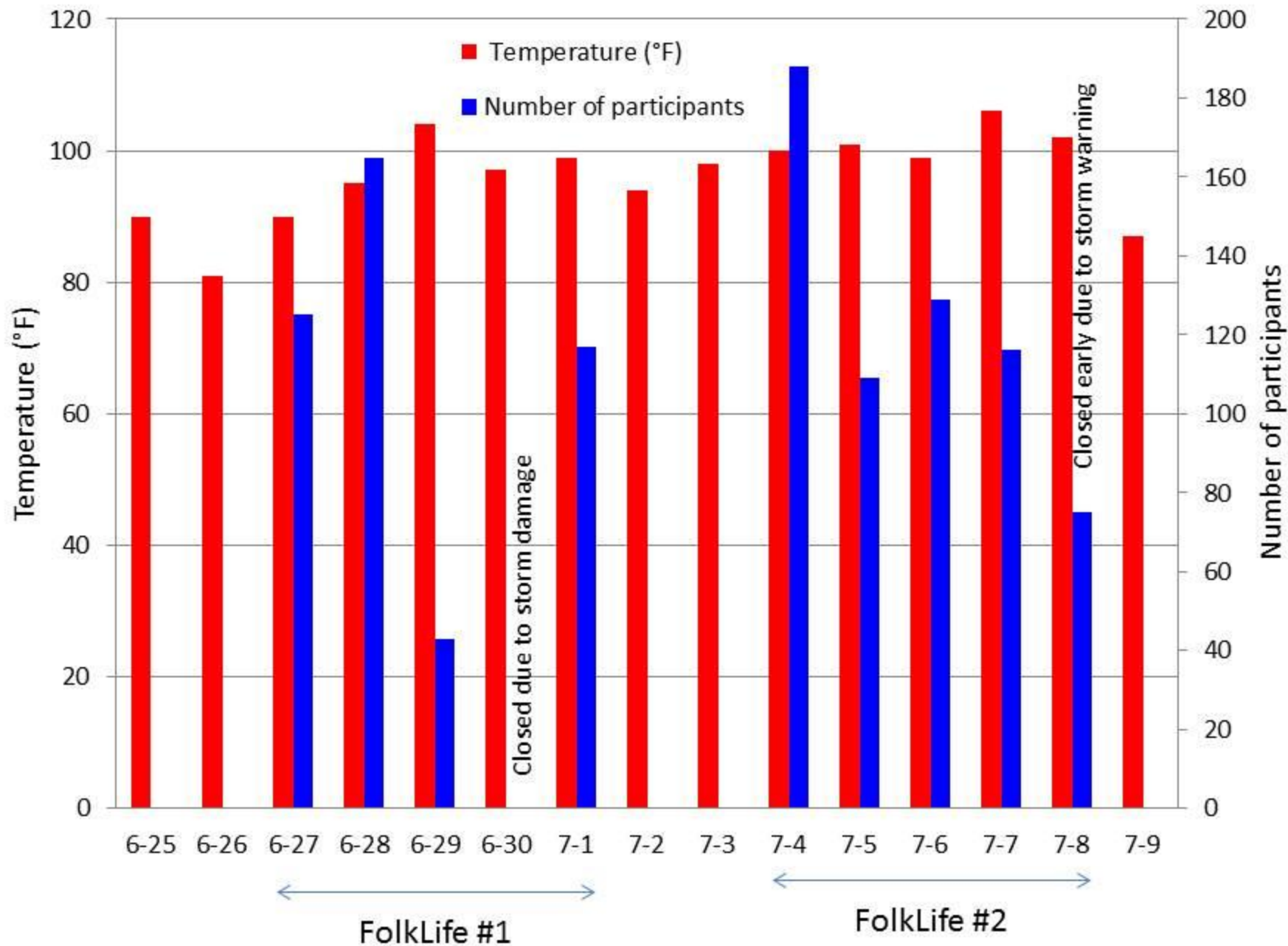
- The US Industry
 - /28-6/29: Curt McIlravy ([Trident Seafoods](#), Motley, MN)
 - 6/30: Bong Hyo Ko, Andrew Davidoff, Sami Cheon, Sungik Hur ([LM Foods](#), Carteret, NJ) – Due to the storm damage, they stopped by the site and delivered their samples and pins (*I love surimi seafood*).
 - 7/5: Bill Ott ([Trans Ocean Products](#), Bellingham, WA)
 - 7/6-7/7: Richard Draves ([American Seafoods](#), Seattle, WA)
 - Yamasa Fish Cake provided samples of tempura, kamaboko, and chikuwa
- OSU
 - Matt Fowler
 - Angee Hunt
 - Jae Park

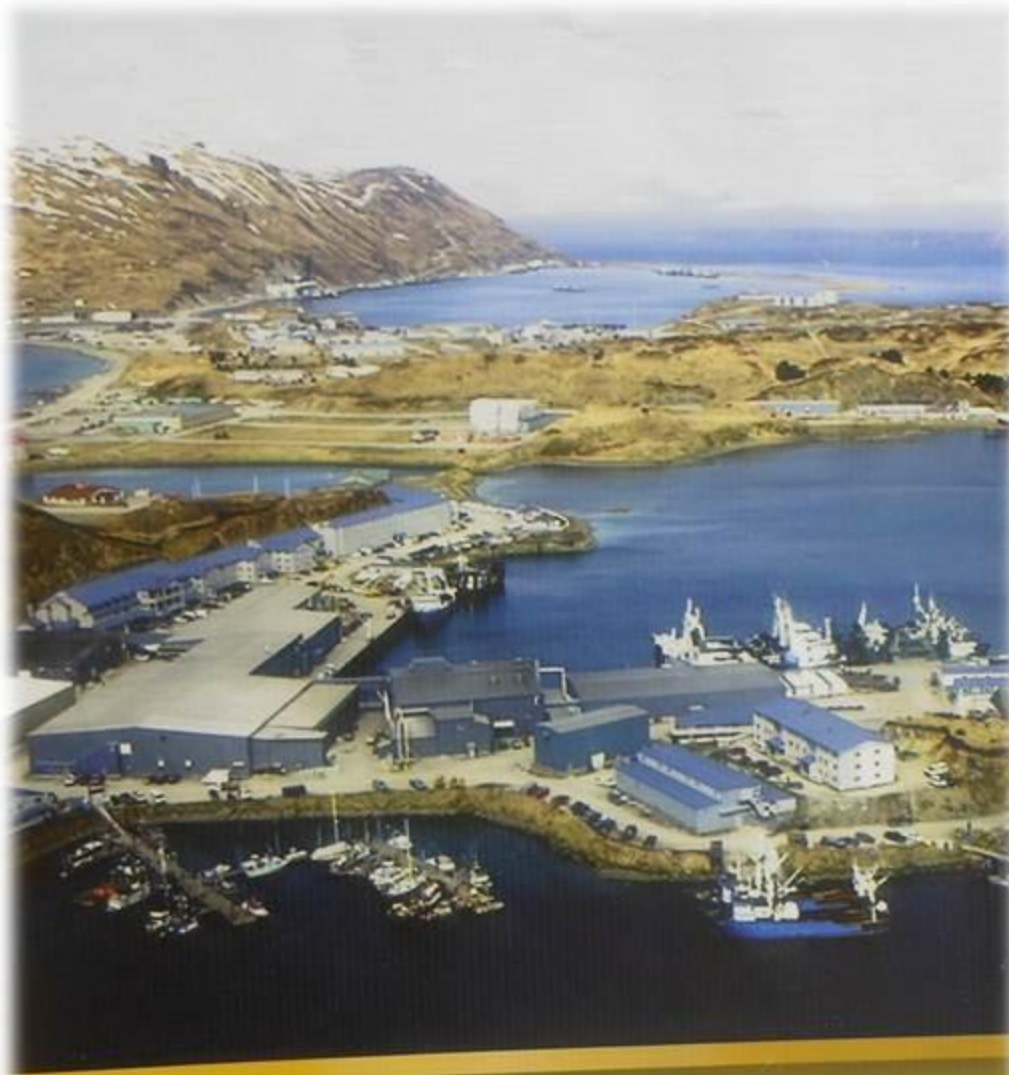
Scorching Weather in DC during the two weeks (June 25 – July 9)

24	25	26	27 	28	29	30
OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED
						
Hi 93°F Lo 71°F	Hi 90°F Lo 71°F	Hi 81°F Lo 62°F	Hi 90°F Lo 66°F	Hi 95°F Lo 71°F	Hi 104°F Lo 73°F	Hi 97°F Lo 72°F
Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0.39in.	Precip (in) 0.59in.

◀ Previous Month		July						Next Month ▶	
Sun	Mon	Tue	Wed	Thu	Fri	Sat	8	9	
1	2	3	4 	5	6	7	OBSERVED	OBSERVED	
OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	OBSERVED	
									
Hi 93°F Lo 77°F	Hi 94°F Lo 79°F	Hi 98°F Lo 75°F	Hi 100°F Lo 76°F	Hi 101°F Lo 80°F	Hi 99°F Lo 82°F	Hi 106°F Lo 81°F	Hi 102°F Lo 82°F	Hi 87°F Lo 73°F	
Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0.02in.	Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0in.	Precip (in) 0.95in.	Precip (in) 0in.	

Temperature and the number of attendees participating in sample making





TOP
Industry partners such as UniSea, Trident Seafoods, American Seafoods, and Maruha-Nichiro NA apply Oregon State University research to improve their production processes and take what they learn at Surimi School to implement best practices at their state-of-the-art processing facilities in Alaska.

Photo courtesy of Tracy Miller, UniSea Inc.

Industry Partners
such as UniSea,
Trident Seafoods,
American Seafoods,
and Maruha-Nichiro
NA apply Oregon
State University
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what they learn at
Surimi School to
**implement best
practices** at their
state-of-the-art
processing facilities in
Alaska.

OSU Surimi School

also proudly presented general public:

- 1) How surimi is manufactured and how it has been **Americanized** using the US fish (**Alaska pollock** and **Pacific whiting**).
- 2) How **sustainable** Alaska pollock and Pacific whiting are.
- 3) Surimi is made primarily from **clean and lean fish from uncontaminated seawater**.
- 4) How **surimi crabstick** and **surimi shrimp** are made.
- 5) How **low fat and cholesterol** in surimi seafood.
- 6) **Applied colors on the crabsitck** are **all natural** from paprika, tomato, and/or carmine.

Americanization of Surimi

- Surimi production **yield increased** from 12-15% (1990) to over 30% (2010-2012) and the industry enabled to **save our fishery resources**.
- The **US surimi production is the largest** by country for the last 20 years.
- US leads the **production technology** of surimi and crabstick.
- US leads the **surimi research and education** by OSU Surimi School since 1993.

Sustainable Fish for Surimi

- Alaska pollock is **very sustainable** with its annual TAC (total allowable catch) at **1.2 million tons per year** in average for the last 25 years.



Major fishing grounds:
Bering Sea
Aleutian Islands
Gulf of Alaska



Major fishing grounds:
Oregon and
Washington Coast

- Pacific whiting is also **very sustainable** with its annual TAC at **0.25 million tons per year** in average for the last 20 years.

Pacific Whiting

Merluccius productus

How much are 1.2 million tons?

1,200,000 tons = 60,000 containers

= 60,000 x 40 ft = 2,400,000 ft

(1 mile = 5,280 ft)

= 454 miles

454 miles long with 40 ft containers lined up bumper to bumper.

Washington DC  Boston



Demonstration - Shrimp making



Demonstration - Crabstick making



1

Surimi
stocks of Asia
Pacific whiting.



4

The fish paste is mixed with stabilizers and frozen into blocks. It is now surimi.

5

The surimi blocks are heated in an electric current and an electric current is used to make crab sticks, so

The minced fish is thoroughly washed with water pressed out.

other ingredients are added and further processed into other seafood.

Surimi made in Japan
University of Alaska

Uncle Curt is showing how to make crabstick his future customer.



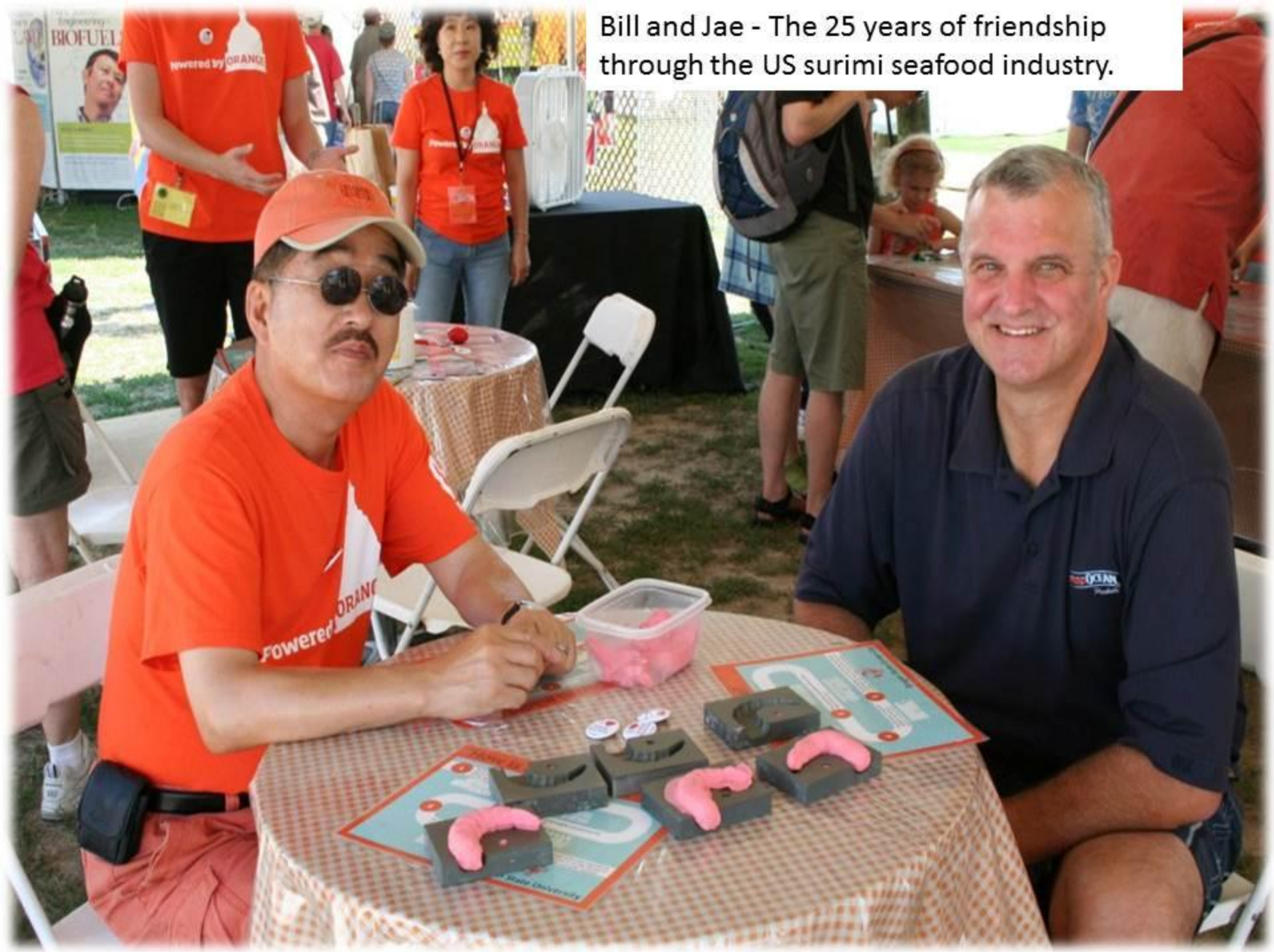






Dr. Barbara Blakistone
(Director of Science and
Technology, National Fisheries
Institute)

Bill and Jae - The 25 years of friendship through the US surimi seafood industry.





Sony
invented a
new chilling
device for
Jae

Feed the World.
Power the Planet.

Washington State University is embracing
science of plants to help feed an ever-growing
population by producing larger quantities
of more nutritious foods. It is also looking
for ways to feed better through more
sustainable energy systems. Visit the site
to learn how WSU is putting this exciting
research into action.

Did You Know?

Did you know that plants are the source of most of the energy we use in our homes and businesses? Did you know that plants are also the source of most of the oxygen we breathe? Did you know that plants are the source of most of the food we eat? Did you know that plants are the source of most of the medicine we take? Did you know that plants are the source of most of the materials we use in our homes and businesses? Did you know that plants are the source of most of the energy we use in our homes and businesses? Did you know that plants are the source of most of the oxygen we breathe? Did you know that plants are the source of most of the food we eat? Did you know that plants are the source of most of the medicine we take? Did you know that plants are the source of most of the materials we use in our homes and businesses?



OSU Surimi
School goes to
the DC Metro
Line!

Smithsonian

The Mall →

SURIMI
OSU
OSU
SCHOOL



Storms hammer DC area after record-setting heat

Associated Press

Posted June 30, 2012 at 12:36 a.m.

6/29: **104 F**

29	30
OBSERVED	OBSERVED
	
Hi 104°F Lo 73°F	Hi 97°F Lo 72°F
Precip (in) 0.39in.	Precip (in) 0.59in.

6/30: 1:00am – 4:00am: **70-90 miles/h wind**

Over million customers without power.



After the 6/30 Storm

Our tent was
wiped out
completely!





After the 6/30 Storm



After the 6/30 Storm

July 1:
Back to the Business
after the 6/30 Storm



Curt McIlvay , Marketing Manager of **Trident Seafoods**
(OSU Surimi School Sponsor)



Oregon State University

Surimi School

Seafood Research and Education Center

School

That crab-Savvy California soft-shell? It learned how to food scientist said turn low-value fish into 1993, Park has taught techniques at annual Oregon, Asia and Europe

Powered by ORANGE

Bill Ott , R&D Director of **Trans Ocean Products**
(OSU Surimi School Sponsor)




Team **LM Foods** arrived after the
6/30 Storm
(OSU Surimi School Sponsor)



Richard Draves, VP of Development, American Seafoods
(OSU Surimi School Sponsor)





God knows I
worked at the
surimi tent, not
came to DC for
a sightseeing!

Nick Buscovich
(National
Manager,
Shining Ocean
OSU Surimi School
Sponsor). He
worked at the
festival on the
first day (6/27).
But no pictures
were taken at the
photo line: Jae's
fault!



2011
WASH STATE
2011

Beverage

WASHINGTON STATE
UNIVERSITY

powered by ORANGE

OSU

After long and hot day.....



We make
surimi from
pollock and
whiting at sea!



PRIDE OF THE SEA

AMERICAN
SEAFOODS
COMPANY

11111
RICH DRAVES
A
4/9/10 C SHIFT



LOBSTER SMART™ Natural

LOBSTER FLAVORED SEAFOOD FLAKES
MADE WITH SURIMI, A FULLY COOKED FISH PROTEIN



OMEGA-3 FISH OIL



400mg/SERVING

SEE BACK FOR MORE INFO

WILD CAUGHT



SUSTAINABLE
PACIFIC FISH WITH
LOBSTER MEAT ADDED



- COLORED BY ANTI-OXIDANT LYCOPENE (0.4mg/SERV)
- NO PHOSPHATES
- HIGH CALCIUM
- LOW FAT
- 0 TRANS FAT



Serving Suggestion

NET WT. 8oz (227g)

PRODUCT OF USA
KEEP REFRIGERATED OR FROZEN
PREMIUM QUALITY • READY TO EAT



If product purchased frozen, use within 70 days after thaw while sealed, 7 days after opening.



LOUIS KEMP

Quality Since 1978

HEALTHY

90 Calories • 0g Fat

CRAB DELIGHTS® Leg Style

Fully cooked & ready to serve

Serving Suggestion

Recipe on back

NET WT 8 OZ (227g)

M211610 06:36:00
USE BY AUG232012

Crab flavored seafood, made from quality fish protein

Trident Seafoods



Classic Bay



with **REAL CRABMEAT**

IMITATION CRABMEAT

Trans Fat 0g

No MSG
Fully Cooked
Ready to Eat
No Preservatives

KEEP FROZEN
NET WT.
16 oz. (1 LB)
454g



Nutrition Facts
Serving Size: 1/2 cup (85g)
Servings Per Container: About 13

Amount Per Serving	
Calories 110	Calories from Fat 5
% Daily Value*	
Total Fat 1g	1%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 10mg	3%
Sodium 520mg	25%
Total Carbohydrate 17g	6%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 7g	
Vitamin A 2%	Vitamin C 0%
Calcium 0%	Iron 2%

*Percent Daily Values are based on a diet of other people's secrets. Your daily values may be higher or lower depending on your calorie needs.

	Calories: 2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

Ingredients: Fish Protein (Pollock and/or Whiting), Water, Wheat Starch, Sugar, Corn Starch, Sorbitol, Contains 2% or less of the following: Salt, Soybean Oil, Mirin Wine, Natural and Artificial Crab Flavor, Calcium Carbonate, Crab Seasoning, Egg Whites, Gel Fiber, Sodium Tripolyphosphate, Tetrasodium Pyrophosphate, Color Additives (Carmine, Paprika).

Allergens: Fish (Pollock and/or Whiting), Wheat, Soy, Crab, Eggs

Manufactured by: **LM FOODS, CARTERET, N.J.**



Dyna-Sea

Wild Caught
IMITATION CRABMEAT

CRABTM
sticks

CRAB FLAVORED SEAFOOD,
made from surimi, a fully cooked fish protein
LM Foods



INGREDIENTS: Fish Protein (Pollock and/or Whiting), Water, Wheat Starch, Sugar, Corn Starch, Sorbitol, Contains 2% or less of the following: Salt, Soybean Oil, Mirin Wine, Natural and Artificial Crab Flavor, Calcium Carbonate, Crab Seasoning, Egg Whites, Gel Fiber, Sodium Tripolyphosphate, Tetrasodium Pyrophosphate, Color Additives (Carmine, Paprika).

ALLERGENS: Fish (Pollock and/or Whiting), Wheat, Soy, Crab, Eggs

Fully Cooked Ready to Eat
KEEP FROZEN:
Important: Keep Frozen Until Used, Sift and Thaw Under Refrigeration Immediately Before Use.

Nutrition Facts
Serving Size: 1/2 cup (85g)
Servings Per Container: About 5

	Amount/Serving	%DV*	Amount/Serving	%DV*	
Total Fat	1g	2%	Total Carb. 15g	5%	
Saturated Fat	0g	0%	Dietary Fiber 0g	0%	
Trans Fat	0g		Sugars 5g		
Cholesterol	10mg	3%	Protein 6g		
Sodium	560mg	23%			
Calories 90			Calories from Fat 9		
*Percent Daily Values (DV) are based on a diet of other people's secrets. Your daily values may be higher or lower depending on your calorie needs.					
Vitamin A	0%	Vitamin C	0%	Calcium	0%
		Iron	0%		

Manufactured by: **LM FOODS, CARTERET, N.J. 07002, U.S.A.**

NET WT.
16 Oz. (1 lb.)
454g





transOCEAN.
Products

Fully Cooked
Ready to Eat

Crab Classic



Yamasa Fish Cake (Los Angeles, CA)



ACKNOWLEDGEMENT

- Smithsonian Institute
- Shelly Signs (OSU Director – University Events)
- Steve Clark (OSU VP – Communication)
- Shining Ocean
- Trident Seafoods
- LM Foods
- Trans Ocean Products
- American Seafoods
- Yamasa Fish Cake

