



Culinary Institute  
of America

# Caviar



# Learning Objectives

- Describe the historical background and cultural relevance of caviar.
- Identify different types of sturgeon and their unique caviar characteristics.
- Explain legal and environmental issues affecting caviar production.
- Compare farmed and wild caviar in terms of sustainability.
- Outline the steps involved in processing, brining, and grading caviar.
- Explain proper methods for purchasing, storing, and serving caviar.
- Recognize sturgeon-based, alternative, and flavored caviar options.
- Discuss traditional and modern culinary uses of caviar.

# The History of Caviar

- Sturgeon: 250+ million years old
- Caspian sturgeon = most prized
- Caviar eaten since 10th century (Persia, Russia)
- Symbol of wealth and luxury

## Milestones

- 1800s: Russia standardizes grading/processing
- 1900s: overfishing, habitat loss reduces population
- 2005: U.S. bans wild beluga imports (endangered), legal only through farming
- Today: focus on sustainable/environmentally safe fish farming



# Caspian Sea

- Bordered by Russia, Iran, Kazakhstan, Turkmenistan, Azerbaijan
- Biodiversity hotspot, especially for sturgeon

## Legal & environmental issues

- Disputed water rights and weak international laws
- Overfishing, pollution, and poaching
- Uneven enforcement across countries
- Needs coordinated regional management



# Caspian Sturgeon: Beluga

- Average weight about 300 lb., can exceed 900 lb.
- Lives up to 80 years, spawns at 18–20

## Eggs:

- Produce top-grade caviar
- Color: steel grey
- Flavor: rich and buttery
- Texture: creamy
- Size: 3 to 4 mm (large)



# Caspian Sturgeon: Osetra

- Medium size, 250-600 lb. avg.
- 60-year life span; spawn after 12 years

## Eggs:

- Color: brownish-gold
- Flavor: Slightly pungent, nutty
- Texture: firm
- Size: 2.5 to 3.5 mm (medium)



# Great Lakes Sturgeon

- Largest North American sturgeon
- Range 50 to 150 lb., once reached 400 lb.
- Slow-growing; matures around 20 years
- Feeds on small fish and bottom invertebrates

## Eggs:

- Size: about 3 mm (medium)
- Color: dark brown to black, slight golden and grey tones depending on environment
- Texture: firm
- Flavor: mild, slightly nutty

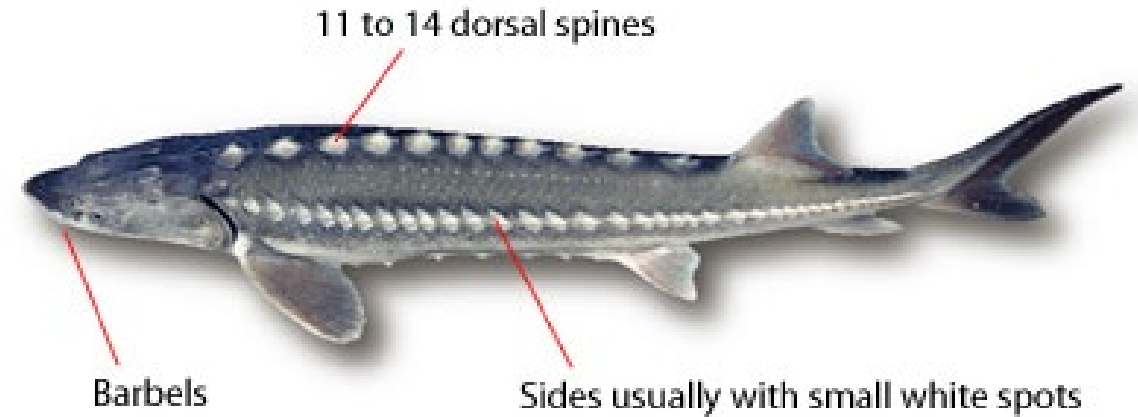


# Farmed California White Sturgeon

- Native to the west coast
- Raised for about 10 years until large enough so that both the eggs and the meat can be used

## Eggs:

- Color: dark brown/black
- Flavor: rich, buttery, slightly nutty
- Texture: firm
- Size: 3.2 to 4.0 mm (med-large)



# White Sturgeon Farm, California



# Conservation & Sustainability

## Farmed Caviar

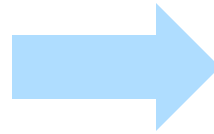
- Eco-friendly alternative to wild harvests
- White & Siberian sturgeon are most sustainable
- California: closed-tank systems, sustainable, low environmental impact
- France: top producer of farmed caviar, especially Siberian
- Beluga farming limited (depends on endangered wild stock)



# Caviar Processing Methods

## Step 1: Roe Extraction

- Live mature female sturgeon is stunned, preventing roe sack deterioration or rupture
- Roe removed



## Step 2: Screening

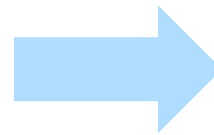
- Eggs gently sorted and separated from tissue using fine mesh screens



# Caviar Processing Methods

## Step 3: Brining

- Lightly salted with a brine to preserve flavor
- 'Malossol' method preferred



## Step 4: Packing

- Eggs graded and packed for storage or sale



# Categorizing Caviar

- This category of grade refers to the color of the caviar
- Scale from 0 to 000
  - 0 (darkest)
  - 00 (medium grey)
  - 000 (lightest)
- Flavor is not significantly affected by color
- Lighter-colored, larger caviar is often considered more visually desirable and commands a higher price



# Caviar Brining

## Malossol process

- Lightly salted (about 3%); finest quality
- Used for prime-condition eggs
- Finest process; tends to be more expensive

## Traditional salting

- Semi-preserved or salted
- Higher salt (around 8%) for longer shelf life
- Flavor often compromised

## Sol process

- Used for pressed (*Paiusnaya*) or broken eggs
- Dense and heavily salted

# Purchasing Caviar

- Tilt the tin slightly and look for a shiny, reflective surface, indicating:
  - **Freshness:** properly stored, recently packed
  - **Moisture/oil balance:** indicates well-cured, intact eggs
  - **Minimal breakage:** eggs have not burst or dried out
- Dull, wet, or mushy caviar is a sign of poor quality or age
- Pack sizes: 1 oz., 2 oz., 4 oz., 7oz., 14 oz., 16 oz., 2.2 lb.



# Serving Caviar

## Presentation:

- Chill to 28–32°F
- Serve over ice in tin or glass bowl
- Open just before serving

## Utensils:

- Use non-reactive spoons: mother-of-pearl, horn, bone, glass, or plastic

## Portioning:

- Tasting: ½ to 1 oz. per person
- Use shallow dishes or serving spoons for small portions



# Storing Caviar

- Ideal temperature is between 28–32°F
- Store buried in ice
- Always store in the original tin with a secure lid or rubber band throughout usage
- Reseal tightly to preserve freshness



# Sturgeon-Based Caviar Options

## High-End:

- Beluga
- \$300–\$400+/oz.



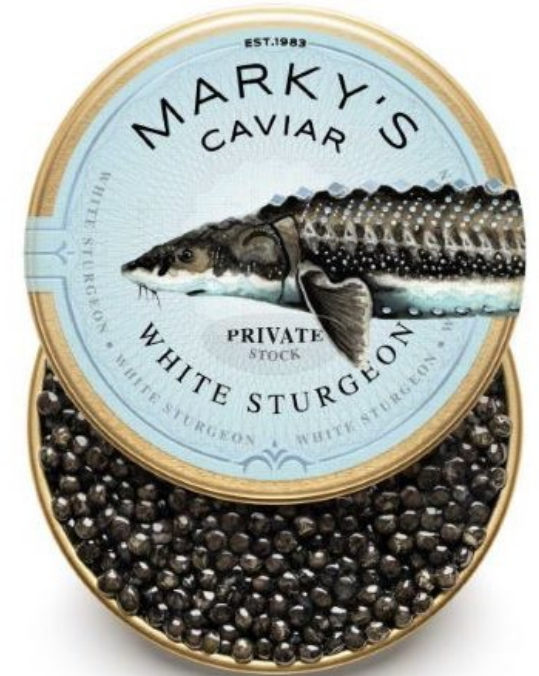
## Mid-Range:

- Osetra
- \$100–\$200/oz.



## Entry-Level:

- Sevruga, Siberian, American White
- \$70/oz.



# Alternative & Flavored Caviar Options

## Non-Sturgeon Alternatives:

- American Paddlefish, Salmon (Gold Pearl), Trout, Whitefish (American Golden), Tobikko
- More affordable, commonly used in modern cuisine

## Flavored Caviar:

- Truffled, beet & saffron, wasabi, citrus blends



# Caviar Uses

## Classic Service

- Chilled, served on blinis, toast, or crackers with crème fraîche
- **Russian style:** buttered bread, sour cream, chopped egg, onion
- **European style:** minimalist, toast or spoon to enjoy pure flavor



## Modern Applications

- **Garnish for:** oysters, deviled eggs, tartare, scallops, sushi
- **Elevated dishes:** pasta, risotto, scrambled eggs, potato purée
- **Hors d'oeuvres:** canapés, amuse-bouches





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# Game Meat



# Learning Objectives

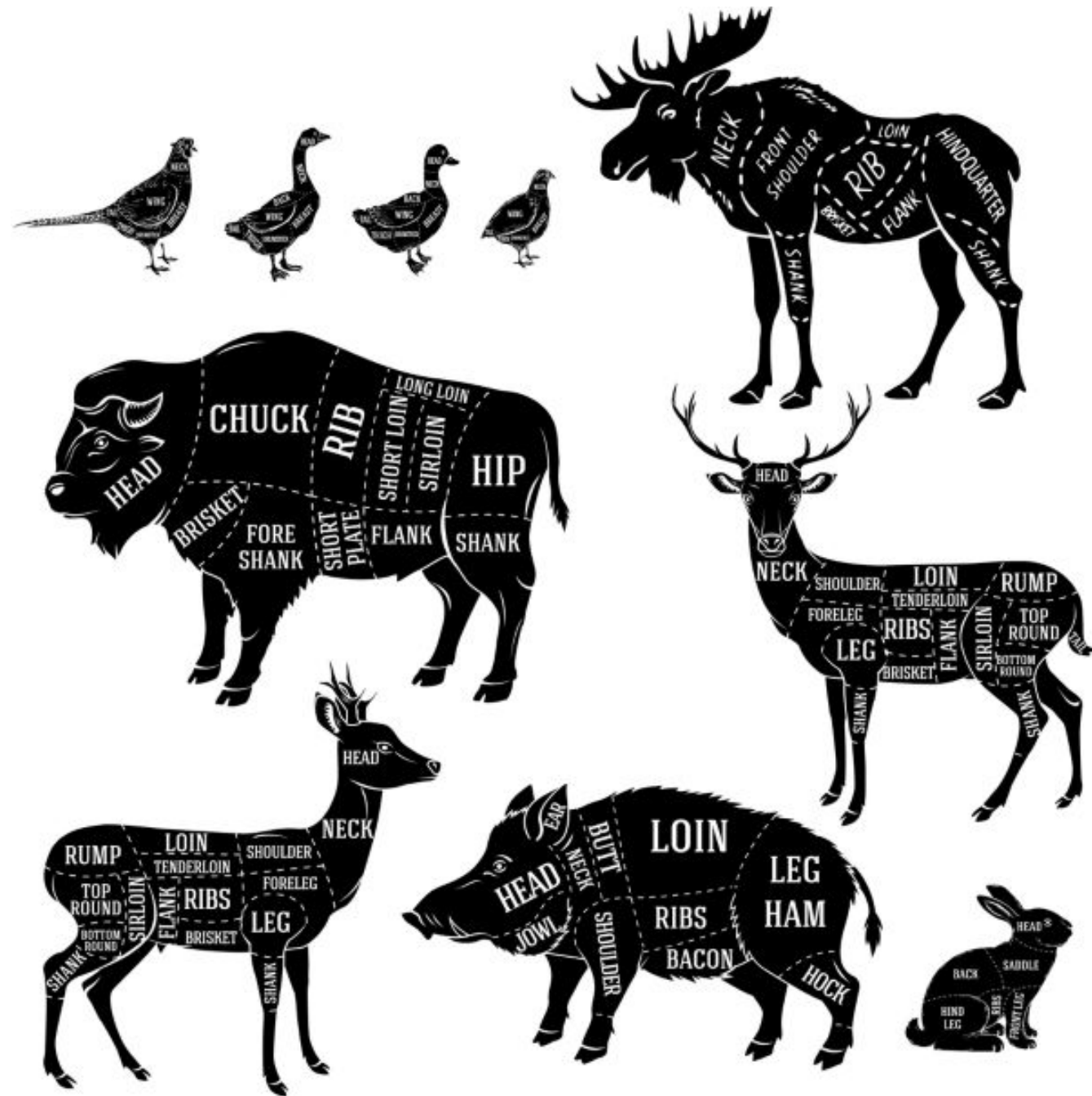
- Explore the reasons behind the growing popularity of game meat.
- Distinguish between wild, farm-raised, and ranch-raised game varieties.
- Describe the six key principles when cooking game meat.
- Analyze how fat content and texture influence cooking methods.
- Match different game meats to appropriate preparation techniques.
- Assess the flavor profiles and characteristics of specific game animals.
- Understand the pairing of game meats with complementary ingredients and flavors.

# Why Game?

- Game cooking is a rediscovery of ancient culinary tradition
- Offers bold, robust flavors and health benefits
- Rising interest due to high-protein, low-fat nutrition

## Why Now?

- No longer seen as exotic
- More available and widely used
- Chefs value its versatility
- Farm-raised options support sustainability



# Types of Game Meat

## Farm-Raised

- Mild, tender, consistent flavor
- Low fat, reliable texture & taste
- Less confinement, small enclosures
- Easy to find in stores and restaurants

## Wild

- Gamy, lean, natural-diet flavor
- Complex taste, seasonal availability
- Varies in size and toughness
- Regulated by hunting laws, rarely sold commercially

## Ranch-Raised

- Animals roam large enclosures with natural diets
- Natural muscle development, richer flavor

# Key Cooking Principles

## **Trim properly:**

remove silver skin  
and sinew before  
cooking

## **Use marinades:**

add moisture and  
flavor, but avoid  
over-marinating

## **Match the method to the cut:**

grill tender cuts,  
braise tougher ones

## **Cook gently:**

game is lean and  
dries out easily

## **Keep it moist:**

techniques like  
barding or en  
papillote help retain  
juices

## **Rest before slicing:**

keeps meat tender  
and juicy

# Quail

- Mild, sweet, slightly nutty flavor
- Tender and juicy texture
- Very low fat; dries out easily
- Grill, sauté, roast, or cook en papillote
- Pair with herbs, smoky flavors, grilled vegetables



# Partridge & Grouse

- Earthy, piney, stronger in wild birds
- Firm but moist; wild birds can be chewy if overcooked
- Very lean, especially wild types
- Roast or braise wild birds; grill or sauté farm-raised
- Pair with bacon, onions, shallots, root vegetables



# Duck

- Rich, savory, slightly sweet flavor (stronger in wild)
- Dense, moist texture; high subcutaneous fat
- Roast, sauté, grill breast; braise legs
- Pair with fruit sauces, hoisin, scallions



# Goose

- Deep, savory, slightly gamey flavor
- Dense texture with firm muscle fibers
- High fat, especially around breast and skin
- Roast or braise (especially older, wild birds)
- Pair with sage, apples, dark leafy greens



# Rabbit

- Mild, slightly sweet, grassy flavor
- Firm, close-grained texture
- Very lean meat
- Grill or sauté loin; braise or stew legs
- Pair with mustard, olives, white wine, rosemary



# Hare

- Stronger, gamier, more mineral flavor compared to rabbit
- Coarse, dense texture
- Needs slow cooking
- Still lean, but richer than rabbit
- Pairs with red wine, dark fruits, root vegetables, mushrooms, rosemary



# Venison

- Mild, clean flavor; slightly nutty or woody
- Fine-grained, very lean texture
- Grill or sauté tender cuts; braise tougher ones
- Pair with red wine, berries, juniper, root vegetables



# Bison

- Rich, slightly sweet, beef-like flavor
- Dense, fine-grained texture
- Very low fat; cooks quickly
- Grill or sauté tender cuts; braise tough ones
- Pair with red wine, onions, mushrooms, garlic, bold spices



# Ostrich

- Beef-like flavor with light sweetness
- Dense but tender texture
- Extremely lean; cook to rare or medium-rare
- Pan-broil, grill, or sauté
- Pair with garlic, berries, grains, chimichurri
- Red meat from a bird; USDA-regulated as livestock



# Alligator

- Clean, mildly sweet flavor with fish-chicken notes
- Firm, springy texture; tenderloin (tail) is softest
- Very low in fat
- Grill, blacken, or fry
- Pair with Creole spices, citrus, herbs, rice, or grits





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Any Questions?