



Piping Plovers and Nantasket Beach

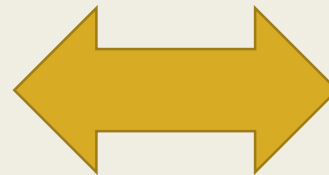
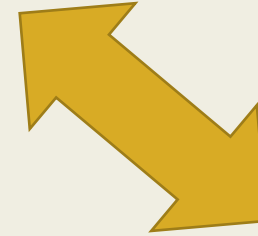


Chris Krahforst, Conservation Administrator
Dave MacDougall, Plover Ambassador

**Hull
Conservation
Department**



**Beach
Management
Committee**



 **Mass Audubon**
South Shore Wildlife Sanctuaries

 **Mass Audubon**
Coastal Waterbird Program

Program Outline

- A. Introductions
 - * Conservation Commission Staff

- B. What is a Piping Plover?
 - * Mass Audubon

- C. What can beach visitors do to help them?
 - * Plover Ambassadors



Birds of our Coast



Coastal bird habitat: Barrier Beach



Barrier Beach:

- a low lying strip of beach and dune that is parallel to the coastline and separated from the mainland by a body of water or wetland.
- Optimal Piping Plover breeding site with dynamic foraging habitats: ocean beach, mudflats, pools, sheltered dunes

Coastal bird challenges: natural and human-related



- Storms
- High tides
- Predators
- Coastal development
- Off-road vehicles
- Dredging and renourishment
- Beach recreation



Piping Plover (*Charadrius melodus*)

<https://usfwsnortheast.wordpress.com/2016/03/09/the-search-is-on-for-piping-plovers/>



- World population: 7,000 birds
- 4,000 breeding birds on the Atlantic Coast, Newfoundland to North Carolina
- 1,610 breeding birds in Massachusetts
- Listed as Threatened under the US and MA Endangered Species Acts



Mass Audubon's Coastal Waterbird Program



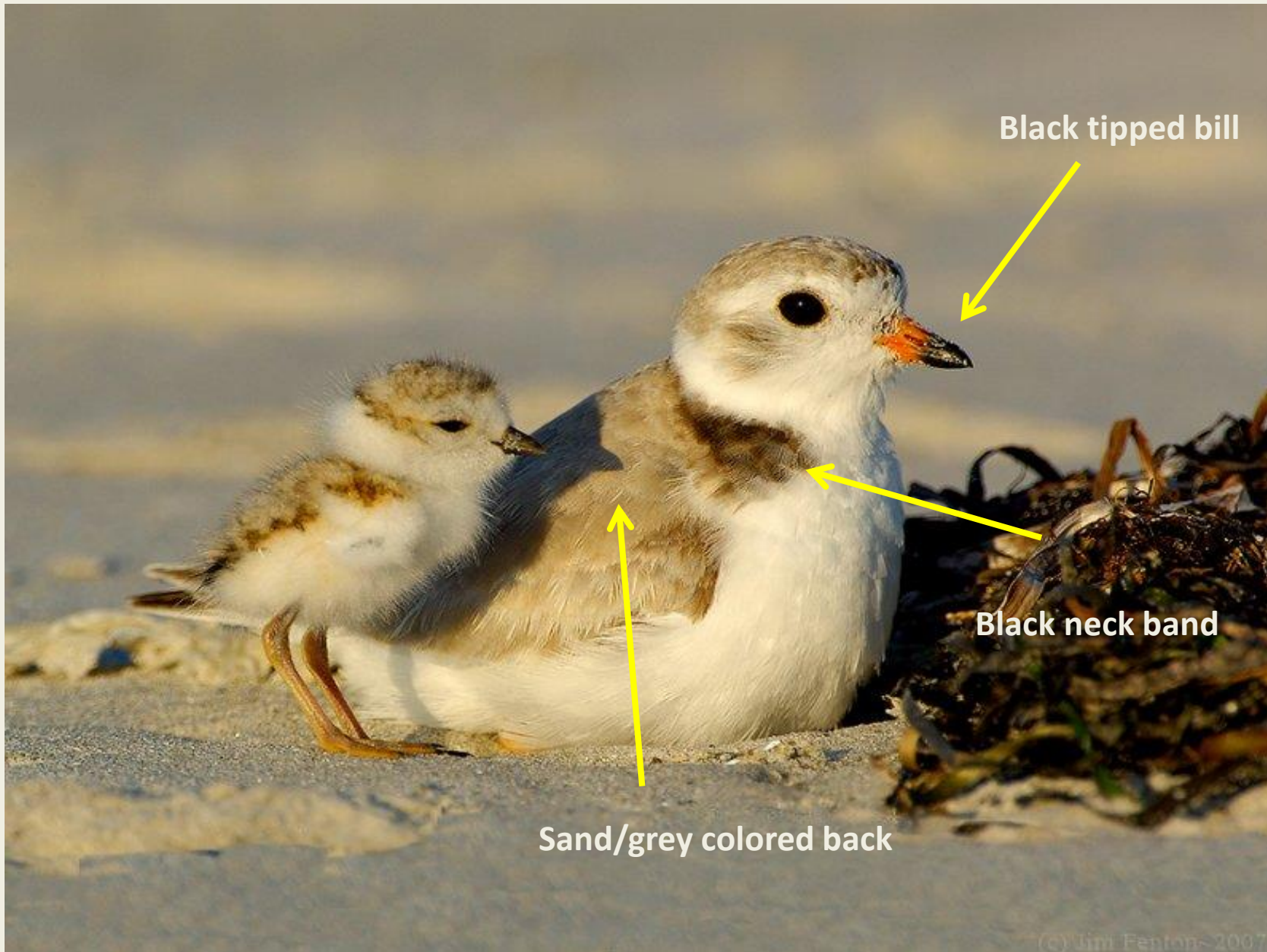
- Protect rare coastal birds and their habitats
- Conserve Massachusetts coastal ecosystems through science-based management

Mass Audubon's Coastal Waterbird Program

- On-the-ground Management
- Outreach and Training
- Conservation Science
- Advocacy



Piping Plover (*Charadrius melodus*)



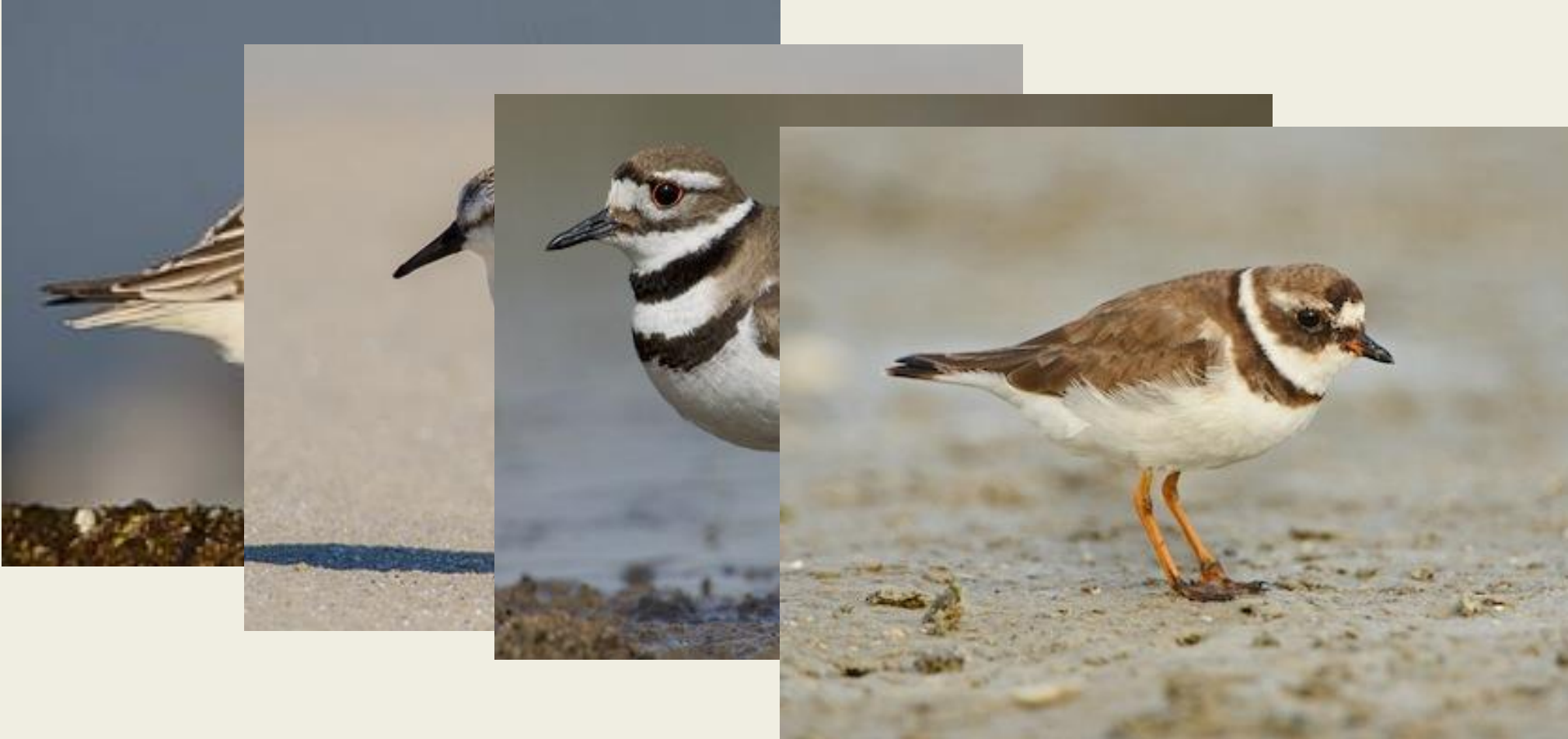
Piping Plover - Hiding in Plain Sight



Non-breeding



Piping Plover Look-alikes



Semipalmated plover

Piping Plover Foraging



Look for them foraging in:

Intertidal zone, wash over areas, mudflats, sand flats, wrack lines, and shorelines of coastal ponds, lagoons and salt marshes.



Items they eat:

Beach-dwelling invertebrates, insects, small crustaceans, mollusks, marine worms, fly larvae, and beetles, other surface-dwelling organisms

Piping Plover Nesting

Scrape:

- Simple nest
- Shallow depression on the sand/ground
- Depth can vary
- Sometimes decorated with bits of shell
- Generally no deeper than necessary to keep the eggs in place



Construction:

- Use legs & feet to dig out
- Lay on ground & rock their bodies back & forth

Piping Plover Nest



Piping Plover Defensive Behavior

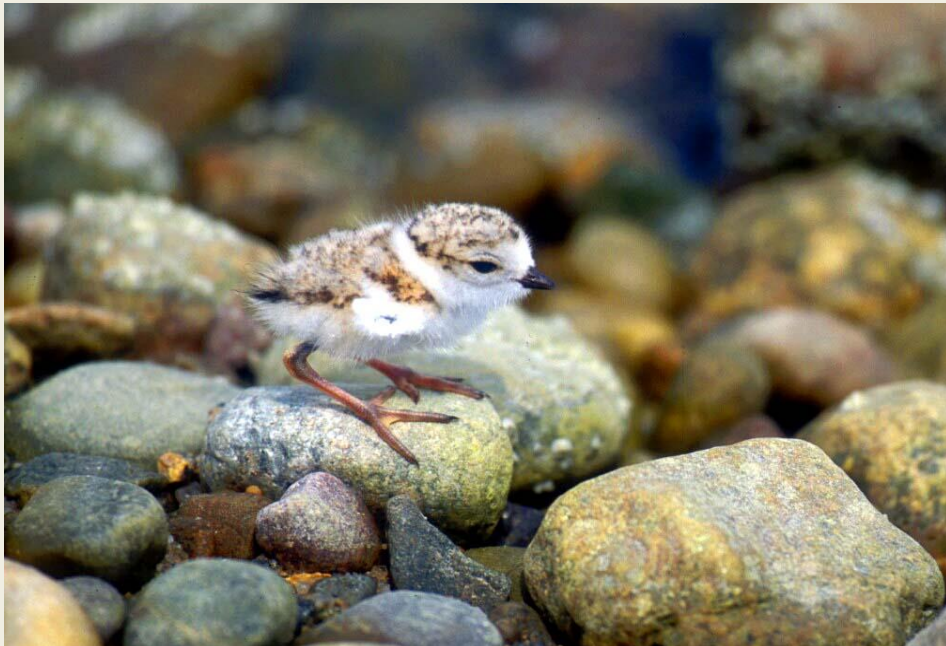


- Broken wing display
- Greeting/Peeping
- Leading you away

Piping Plover Chicks

Cryptically colored chicks are precocial;

- Quickly move from the nest within hours of hatching in order to feed
- Chicks can move over 1/2 mile on first day of life
- In a race to gain weight and ability to fly



Piping Plover Chick Prey Base

Intertidal zone & “wrack line”

- Access is critical for chicks
- Terrestrial arthropods, invertebrates



Chick Body-mass:

- Doubles first 2 days of life
- Quadruples by 7th day
- 35-37 grams at 21 days
- 45-60 grams at size of fledglings & adults



Chick Brooding



Protection from weather,
predators, perceived threats

Piping Plover Fledging



Piping Plover Predators

Mammalian

- Red Fox (eggs, chicks, adults)
- Eastern Coyote (eggs, chicks, adults)
- Striped Skunk (eggs)
- Raccoon (eggs, chicks)
- Virginia Opposum (eggs, chicks?)

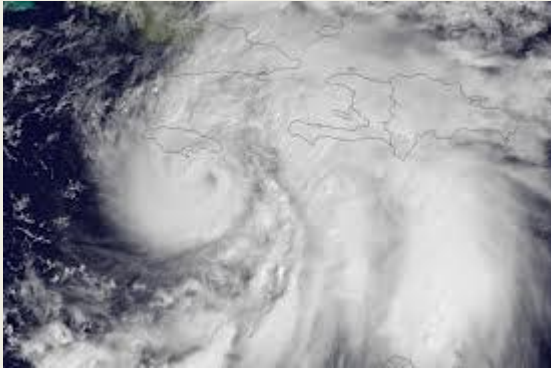


Avian

- American Crow (eggs, chicks, adults)
- Common Grackle (eggs)
- Herring/Great Black-backed Gulls (eggs, chicks)
- Great-horned Owl (eggs, chicks, adults)
- Northern Harrier (chicks, adults)



Management Challenges



Piping Plover Management Guidelines

- USFWS and MADFW
- Protection of birds to permit vehicle on beach
- Fencing
- Pets on beach
- Kite, drone flying
- Fireworks
- Monitoring



Photo taken by Lucy Wightman

Piping Plover Management Tools





Plover Ambassadors

Role of a Piping Plover Ambassador Nantasket Beach, Hull

Peer to peer advocate for following the beach rules

- Dogs, other animals
- Trash
- Fence adherence
- Kites, drones
- Foraging chicks



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DO

- ✓ **Engage in polite and positive conversation to beach visitors about the State and Federally listed Threatened Piping Plover.**
 - This includes: simply alerting people to their presence, educating visitors about the birds and what they can do to help.

- ✓ **Be a watchful eye for people and dogs going inside the fencing or pursuing the birds.**
 - If you see this, you can politely ask them to leave the fenced area or stop the pursuit, and explain why this is important OR call the Police if they are uncooperative.
 - Follow specific contact protocol if issues arise such as downed fencing, evidence of dogs or people in fencing, and other incidents and concerns.
 - Lead by example by keeping a distance from the fence, nest, adults, and chicks.

- ✓ **Enjoy (from a distance) watching the Piping Plover and their chicks grow up!**
 - Count the number of adults and chicks you see. Feel free to send any and all observations to ckrahforst@town.hull.ma.us.
 - Let them go where they like without interference

DO NOT

Under any circumstances go inside the symbolic fencing!

- You could accidentally step on a Piping Plover nest or chicks
- Mass Audubon has guidelines and will adjust or replace any fencing

Point out, photograph, or post location of the Piping Plover nest or newly hatched chicks.

- We want to keep the nest safe by making its location unknown. If you happen to see the adult incubating on the nest, please keep that location to yourself.
- Even photographing the birds puts a focus on them that visitors or gulls key in to.

Become hostile or aggressive to violators

- If violators will not come out of the fencing or leash their dog and/or become hostile towards you; politely disengage from the conversation, leave the area and call the **Police: 781 – 925 - 1212**

Questions?





If you see a Broken Wing Display



- There is likely a 3-4 egg nest or very young chicks nearby--

- WATCH YOUR STEP**

- **DO NOT** stay in the area

- **FOLLOW THE BIRD AWAY**

from the nest in the direction it is leading you



Behavior to watch for throughout the season:

- Flattening
 - Do this to hide from avian predators such as hawks.
 - May also do this when a kite is in the air.



Alice Van Zoeren

Late Season—Document



- Chick survival at 25 days
- Age of first sustained flight--fledging
- Disturbance to chicks

Late Season—Management



- Summer weekends and holidays
- Strategies for busy beaches: accordion fence, “chick sitting”
- Fireworks, bonfires, kites
- Opportunity to educate

Recruiting local champions



