

### **Module 2c**

Life Histories

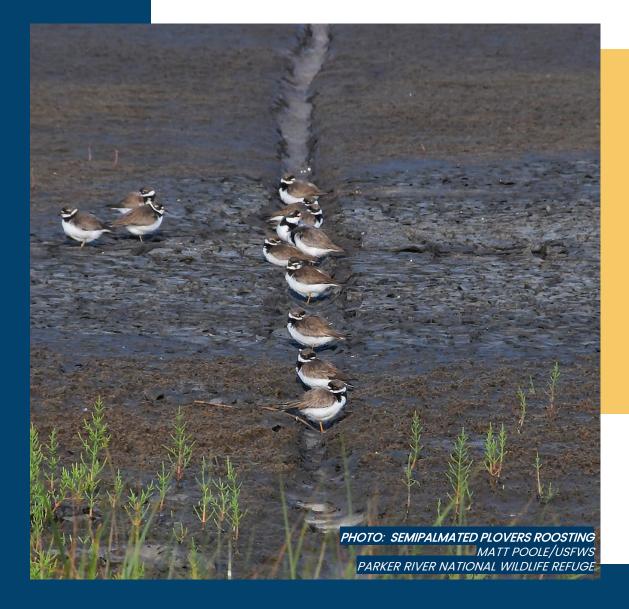
## **Life Histories**

#### Nesting, Migration, Wintering

**Nesting:** the process by which birds **reproduce** and the name of the season during which reproduction occurs – typically synonymous with the **warmest months** of the year

Migration: the long-distance seasonal traveling of birds from one location to another, necessitated by changing environmental conditions and resource scarcity

Wintering: also: "winter", the verb used to describe the location where migratory birds spend their non-reproductive season, i.e.: "the wintering grounds"









In the Northeast Region, most of the birds we steward for are nesting on our beaches.

We call the overarching process "nesting", but the birds do many other things in the meantime!

Coastal birds nest in two ways: in colonies or in territories.



### **Nesting continued**

Life Histories

#### **Territorial Nesters**

- select and defend space from individuals of the same species
- nest far apart
- typically have good camouflage
- include sandpipers, oystercatchers, and plovers

#### **Colonial Nesters**

- select spaces with individuals of the same species
- nest closely together
- may have improved predator defense or predator saturation
- include skimmers and terns

## Nesting 3

Life Histories

Arrival: Coastal birds begin to arrive in the northeast region as early as late February and spend much time feeding to replenish lost body weight.

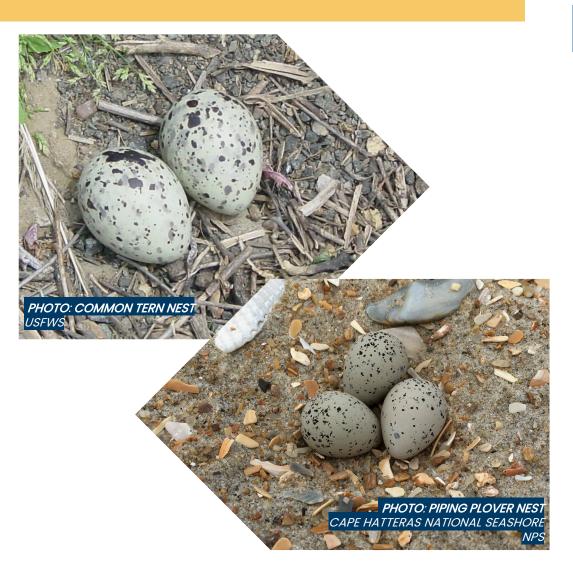
Courtship: Birds court, select mates, and choose nesting sites.

Nesting: Pairs lay eggs, incubate, and hatch their nests.

**Brood-rearing**: Adults care for and raise their young until they can **fly on their own** – and sometimes after!

**Departure:** Adults and fledged chicks eat a lot of food to **store fat** for their **long journey** south. They can begin travelling as early as **July**.





# **Nesting 4**

Coastal birds typically nest on the **ground** in a shallow depression called a "**scrape**".

Some birds line their scrapes with small bits of **shell** or **grass**....or **nothing** at all!

Not just any piece of ground will do – coastal birds have preferences for **substrate**!

The sand, gravel, shell, grasses, and other bits that make up coastal areas are important factors in nest site decisionmaking.





PHOTO: PIPING PLOVER CHIC

RAY HENNES

#### **Nesting 5** Life Histories

Incubation periods range from ~20 to 30 days.

Most coastal birds have **precocial** chicks – the chicks are capable of moving around on their own soon after hatching.

The chicks of **terns, skimmers, and oystercatchers** have parents that bring them food. **Plover** chicks find their own food.

Young chicks still **need warmth** and will tuck into their parents' bellies or underwings to thermoregulate until their own feathers have grown.

PHOTO: PIPING PLOVER AND CHICKS DORIS RAFAELI







#### **Nesting 6** Life Histories

Once chicks are **capable of sustained flight**, they are considered **fledged**.

Some managers remove restrictions on beaches once all chicks have fledged.

For some species like the least tern, this can occur in as little as **21 days** per chick, though for other species like American oystercatchers it can take up to **35 days** on average.

However, nesting **never** goes smoothly! Nests and chicks are eaten, flooded, or disturbed and adults will **try again** until it's time to migrate. We call this "**renesting**".







#### Birds migrate in search of:

- •Food
- •Better Conditions
- Reproduction

The **suitability** of a habitat and its resources waxes and wanes with the seasons





### **Migration 2** Life Histories

Migration occurs in two parts – a northward migration in **spring** and a southward migration in **fall**.

The timing of which is innate to each species.

In the northeast, migrants begin arriving in early March and continue moving through until May.

For **fall migration**, we begin to see birds migrate south as early as **July**.

Some birds don't make it to their wintering grounds until **December**!





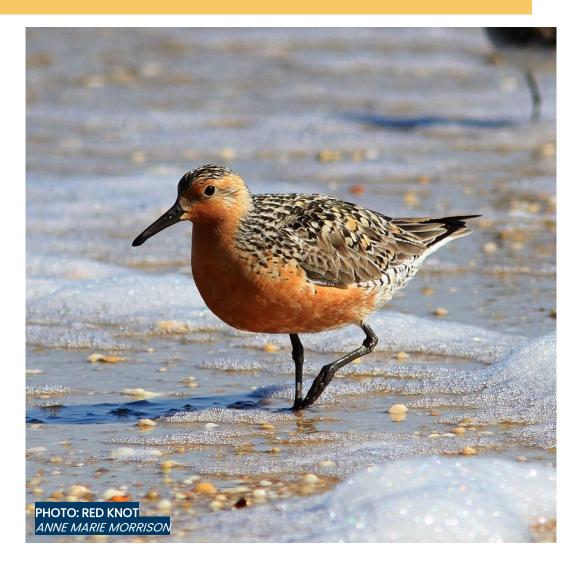
### **Migration 3** Life Histories

**Staging** or **stopover** sites are critical habitats that provide abundant food resources to coastal birds before or during migration.

Birds that are **staging** consume a lot of food to built up fat reserves for a long, uninterrupted journey.

Birds that **stopover** consume enough food to make it to their next stop where they continue this pattern until they arrive on their wintering grounds.





### **Migration 4** Life Histories

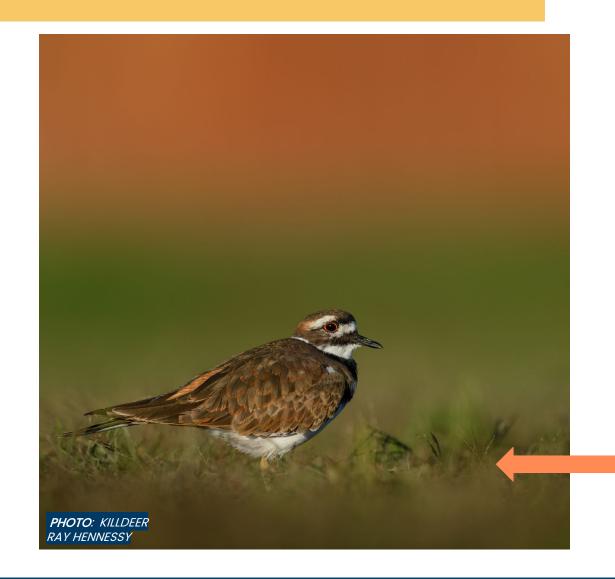
There are a wide range of distances in the migration stories of coastal birds.

Some species, like the **Red Knot**, can travel **9000 miles** from the Arctic to South America. They and other shorebirds rely on horseshoe crab eggs in the Delaware Bay to make it through.

If that seems far then the Arctic Tern may surprise you! They can fly a whopping **50,000 miles** in a single year of migration.

Can you see why it's important that we allow these birds to **rest and refuel** in peace?





# Wintering

Most coastal birds that **nest in the Northeast Region** will migrate to South America or the Caribbean where the weather is warm and food is plentiful

Birds that **nest in the Arctic** will migrate to our shores where they will spend the winter

This familiar bird is one exception - Killdeer live year-round from Massachusetts to Virginia!





## Wintering 2

Life Histories

Many of "our" coastal birds, the ones we see raise their young on our beaches, actually spend the **majority** of their lives on the **wintering grounds** 

These areas are just as **vulnerable** to human development, predators, and climate change

Often, there is **little known** about **where** our coastal birds spend their winters, though scientists are now able to **discover** these places using new technology – like satellite GPS tags!

