WILSON'S PHALAROPE - PHALAROPUS TRICOLOR

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Charadriiformes Family: Scolopacidae Genus: Phalaropus Species: P. tricolor

Habitat:

Biomes: Wilson's Phalaropes breed in wetlands, upland shrubby areas, marshes, and roadside ditches. During migration, most individuals stop over at saline lakes in western North America, as well as coastal marshes and sewage ponds. Their winter habitat consists of high Andean salt lakes as well as wetlands in southern South America.

Distribution:

In US: This bird, the largest of the phalaropes, breeds in the prairies of North America in western Canada and the western United States. It is migratory, wintering in inland salt lakes near the Andes in Argentina. They are passage migrants through Central America around March/April and again during September/October. The species is a rare vagrant to western Europe.

In Other Countries: British Isles, France, Europe, Morocco, Turkey, Iceland, South Africa, Australia, and New Zealand. ALONG WITH Mexico and South America.

Holistic Description: Every year in late summer, migrating Wilson's Phalaropes put on an amazing show as enormous flocks amass on salty lakes of the West. There they spin round and round in the nutrient-rich waters, creating whirlpools that stir up invertebrates that will fuel their migration to South America. Females are rich peachy and gray, and are more colorful than the males. Females court and defend male mates—several per season—while males do most of the work of raising the young.

Species Richness: NO SUBSPECIES

Population Dynamic: Although very common, this bird's population may have declined in some areas due to the loss of prairie wetland habitat. A few staging areas are of critical importance during migration.

Evolution and Systematics:

Evolution: One record from the Rexroad Formation, Upper Pliocene, of Kansas.

Systematics: Morphological evidence indicates that the phalaropes are closely allied to the Tringine sandpipers, whereas genetic information suggests a closer tie to the Scolopacidae sandpipers. Although each of the 3 phalarope species was once placed in a monotypic genus, the group has traditionally been considered as monophyletic, and Wilson's, the least specialized for aquatic habitats, has been treated as the most primitive member.

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 8.7-9.4 in (22-24 cm) Weight: 1.3-3.9 oz (38-110 g)

Wingspan: 15.3-16.9 in (39-43 cm)

Coloration: Wilson's Phalaropes are grayish birds with cinnamon or rusty highlights especially on the neck. In the breeding season females are more colorful than males, with a dark line through the eye extending down the neck. The throat is white and the neck is washed rusty. Nonbreeding birds are pale gray above, white below, without the strong facial markings of other phalarope species.

General Body Features: Wilson's Phalaropes are small shorebirds with long legs, slender necks, and very thin, straight, long bills. They have sharply pointed wings.

Special Features of the Body: Shorebirds are designed, or adapted, to survive in open habitats. Their brown, rust, black, and white plumage makes them less conspicuous to predators. Their bi-coloration, dark on the back and lighter on the belly, further camouflages them from predators. Their light bellies blend in against the light sky when seen from below. When observed from above, by a falcon for example, their dark backs blend in with the beach or mudflat below

Special Features of the Head and Sensory Organs: Long-billed shorebirds probe in the mud, opening just the tip of their bills. This helps them pick out their food without getting a mouthful of mud in the process. Their bills are highly adapted tools for finding food. Some species will probe for invertebrates in mud or water, poking their bills up and down in rapid succession like a sewing machine until they feel something to eat. Others have bills perfectly adapted to swishing through the water to filter food from the water column.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Shorebirds have long legs for wading. Their long toes give them the stability they need for their seemingly endless walking and running along the water's edge and in soft mud.

Any Special Internal Anatomy: Not only used for finding food, bills are used for preening as well. A special oil gland located at the base of their tails helps to keep their feathers dry. The birds spread the oil from this gland with their bills or the backs of their heads when preening themselves. The oil repels water from the feathers, keeping them warm and dry

Sexual Dimorphisms: The breeding female is predominantly gray and brown above, with white underparts, a reddish neck and reddish flank patches. The breeding male is a duller version of the female, with a brown back, and the reddish patches reduced or absent. In a study of breeding phalaropes in the province of Saskatchewan, Canada, females were found to average around 10% larger in standard measurements and to weigh around 30% more than the males. Females weighed from 68 to 79 g (2.4 to 2.8 oz), whereas males average 51.8 g (1.83 oz).
Differences Between Juvenile Stage and Adult: Young birds are grey and brown above, with whitish underparts and a dark patch through the eye. In winter, the plumage is essentially grey above and white below, but the dark eyepatch is always present.

Behavior:

Diurnal, Nocturnal, or Crepuscular: BOTH DIURNAL AND NOCTURNAL, INTERMITTENT SLEEPING
Activity: Phalaropes are unusual in that their mating system is polyandrous, meaning females usually mate with multiple males. Females vie for males with aggressive postures involving jutting the head back and forth, sometimes breaking into fights. Once the female acquires a mate, she begins to use courtship displays involving bowing and upright postures to initiate copulation. Soon after laying a complete clutch, the female usually abandons the male to seek out another male to mate with. Wilson's Phalaropes are very social throughout the year. They nest relatively close together in small, loose colonies, and during migration they travel in large flocks. Predators include garter snakes, gulls, crows, blackbirds, skunks, ground squirrels, and racoons.
Locomotion: Primarily aquatic, although more terrestrial than other phalaropes. Often stands on one foot to sleep. Toes bordered by a narrow fringe, not lobed as in other phalaropes; walks well on land. Occasionally perches on observation towers during breeding season. Wings narrow, straight and pointed, for fast flight.
Communication and Perception: Both sexes make a short, nasal call both during courtship and as a way of staying in contact. Females make a series of low, hollow notes for communication over longer distances. At close range they can also make a quiet purring or a low, somewhat frog like call. Birds at migration roosts make soft gurgling calls.
Home Range: Highly gregarious and nonterritorial throughout annual cycle. Average distance to conspecific nests less than that of other shorebirds in same habitat, but some avoidance of nesting conspecifics suggested by hyperdispersion of nests. Occasionally maintain feeding territories along linear stretch of beach; observed during breeding season, at w. North American staging areas when food scarce, and on wintering grounds. Also, males may defend mobile feeding territory near Blue-winged Teal during breeding season.
Degree of Sociality: Highly gregarious and social throughout year. During breeding season, may nest < 5 m apart.
Level of Aggression: COURTSHIP: Characterized by female-female (occasionally male-male) aggression using several recognizable postures or behaviors. In order of increasing aggression, these behaviors include: head retraction threat; head forward threat; flying threat; and fights.
Migration: Long-distance migrant. Females depart breeding areas first, followed by males and finally juveniles. All birds stop for several weeks during migration at saline lakes to take advantage of abundant invertebrate food. By mid-September, they are in South America—in high-elevation lakes in the Andes, as well as in the Patagonian lowlands and Tierra del Fuego.

Predators:

Predators: Garter Snake, Gulls, Common Crow, Red-winged Blackbird, Yellow-headed Blackbird, Striped Skunk, Franklin’s ground squirrel, Raccoon, Peregrine Falcon, Prairie Falcon, Northern Harrier.
Anti-Predator Defenses: Sexes differ in response to potential egg and chick predators. Most distraction displays performed by male, especially during late incubation, but females occasionally false-brood by squatting on the ground and appearing to incubate. Incubating males may flush from nest at long distance and approach intruder, or < 1 m and feign injury; performing bird may repeatedly return to intruder. Mobbing by multiple males limited to hovering over, but not swooping at, intruder

Diet and Nutrition:

Adult Diet: Wilson's Phalaropes mainly eat small aquatic invertebrates such as midges and shrimp. While foraging in the water, they often spin in circles to create a whirlpool that sucks up food items to the surface of the water. Other techniques include chasing and pecking prey from the surface of mud or water, standing still and stabbing at passing flies, and probing inside mud.
Juvenile Diet: **Wilson's phalaropes are unusually halophilic (salt-loving) and feed in great numbers when on migration on saline lakes such as Mono Lake in California, Lake Abert in Oregon, and the Great Salt Lake of Utah, often with red-necked phalaropes.**
Special Adaptations for Getting Prey: By taking advantage of the surface tension of water, phalaropes use a repeated tweezing motion to "ratchet" the droplets of water up their beak. When the droplet reaches their throat, they dispose of the water and swallow the food particles. By using this process, the phalarope doesn't have to rely on suction to draw up the

water and it doesn't have to depend on its tongue to maneuver food particles up to its throat. It only takes hundredths of a second to "ratchet up" each droplet of water, so this is a much more efficient feeding method for the phalarope than tilting its head back each time to get the droplet to its throat.

Reproduction:

Mode of Reproduction: Polyandrous

Mating System: Female-access polyandry. Female competition for mates occurs in mobile flocks centered around a single male. Within a breeding season females may obtain multiple mates sequentially. FEMALE BIASED SEX RATIO.

Mating Season: March to May

Courtship: Courtship occurs during migration and throughout breeding season. Characterized by female-female aggression using several recognizable postures or behaviors. In order of increasing aggression, these behaviors include: head retraction threat; head forward threat; flying threat; and fights. Early pair formation involves: (1) 1–10 females involved in male aerial chases, which may be initiated by males; and (2) intense mate defense, in which dominant females maintain close (< 1 m) proximity to males and exhibit most aggression. Once paired, males and females maintain close association, either sex being equally likely to follow its mate. Courtship displays with copulation include bowing and upright postures and vocalizations by both sexes, but usually initiated by females.

Territoriality: HOME RANGE

Mating: Copulation initiated by either sex; occurs on land, in shallow water, or while swimming. Early nesting behavior characterized by pairs circling upland areas or walking back from wetland margins into vegetation. Pairs engage in scraping behavior and choking displays typical of shorebirds.

Nesting: The female usually chooses a site around the edge of a wetland or in surrounding upland vegetation. The female lays her eggs in nothing more than a scrape on the ground. Later, the male tidies the scrape and arranges the surrounding vegetation to hide the nest.

Egg-Laying: Egg Length: 1.3-1.4 in (3.2-3.5 cm) Egg Width: 0.9-0.9 in (2.3-2.4 cm) Incubation Period: 18-27 days Egg Description: Buffy, covered with brown blotches.

Hatching and Incubation/Gestation: Fully feathered and eyes open, able to feed themselves. Precocial young, hatch fully feathered.

Development: NONE

Parental Care: Brooding by male only. Away from nest, brooding of chicks decreases gradually from hatching to fledging; pattern paralleled by decline in circulating prolactin levels in males. Chicks feed themselves.

Lifespan: The average longevity in the wild is 10 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Wilson’s Phalarope numbers have remained level or declined slightly since 1966 (less than 1% per year), according to the North American Breeding Survey. A 2012 assessment estimated their population at 1.5 million breeding individuals, although it noted a lack of data and based this estimate on a 2006 study. Wilson’s Phalaropes breed across the Great Plains and intermountain West, and their numbers dropped sharply in the early twentieth century as wetlands in these regions were altered. They are still dependent on wetland habitat, water quality, and the availability of surface water. On migration they stage in huge numbers at hypersaline lakes such as Mono Lake and the Salton Sea. Because so many birds congregate, changes to these areas including water diversion and reclamation could have serious repercussions.

Conservation Efforts: ^^^^^

Extra Facts:

1. Wilson's Phalaropes are one of only two species of shorebirds that molt at resting sites on the migration pathway, rather than on the breeding grounds before leaving or on the wintering grounds.
2. While stopping over to molt on salty lakes in the West, Wilson's Phalaropes usually eat so much that they double their body weight. Sometimes they get so fat that they cannot even fly, allowing researchers to catch them by hand.
3. Wilson's Phalaropes almost always lay a clutch of exactly four eggs.
4. Unlike most birds where the female has the predominant role in caring for young, female phalaropes desert their mates once they’ve laid eggs. While the male raises the young by himself, the female looks for other males to mate with. This unusual mating system is called polyandry, and it’s reflected in the way the two sexes look, with the females more brightly colored than the males.

Notable Species: NO SUBSPECIES