

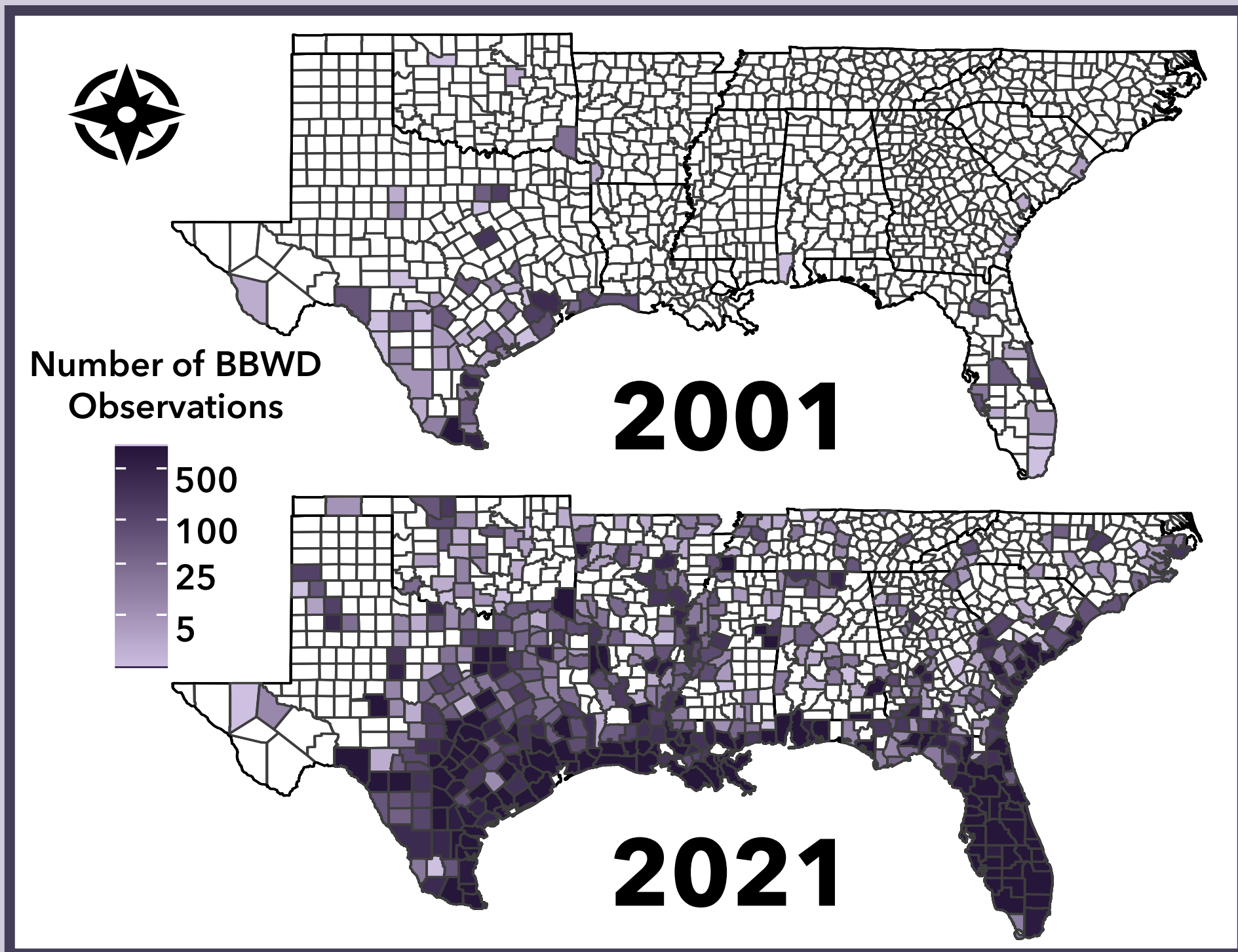


# Nest box-mounted PIT tag readers reveal cryptic recruits & nest box preferences of Black-bellied Whistling-Ducks and Wood Ducks in Louisiana

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## Introduction

- **Rapid range expansion of Black-bellied Whistling-Ducks (BBWD)** into the southeastern United States



- **Possible management implications** for other cavity nesters, especially **Wood Ducks (WODU)**
- Typical field methods **fail to capture** important breeding behaviors

## Objectives

1. Identify individuals that use nest boxes but are not physically captured on a nest.
2. Quantify nest box visitation

## Methods

- We converted all nest boxes to duplexes in February 2021; **each duplex consisted of a single pole with one old and one new box**
- Installed PIT tag readers on 40 duplex-style nest boxes at Sherburne WMA
- Marked all adults and ducklings captured in nest boxes with PIT tags from 2020 to 2022



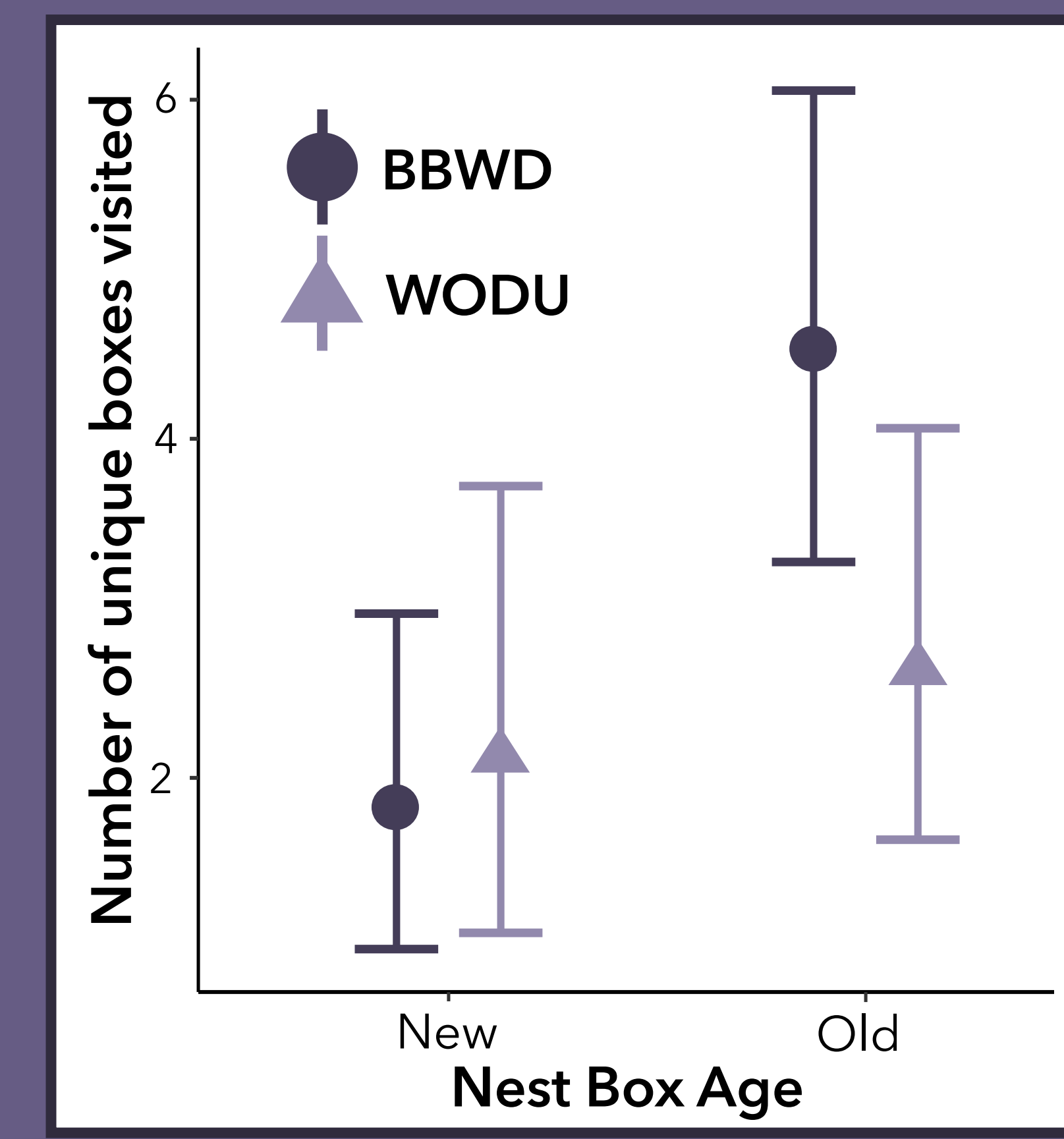
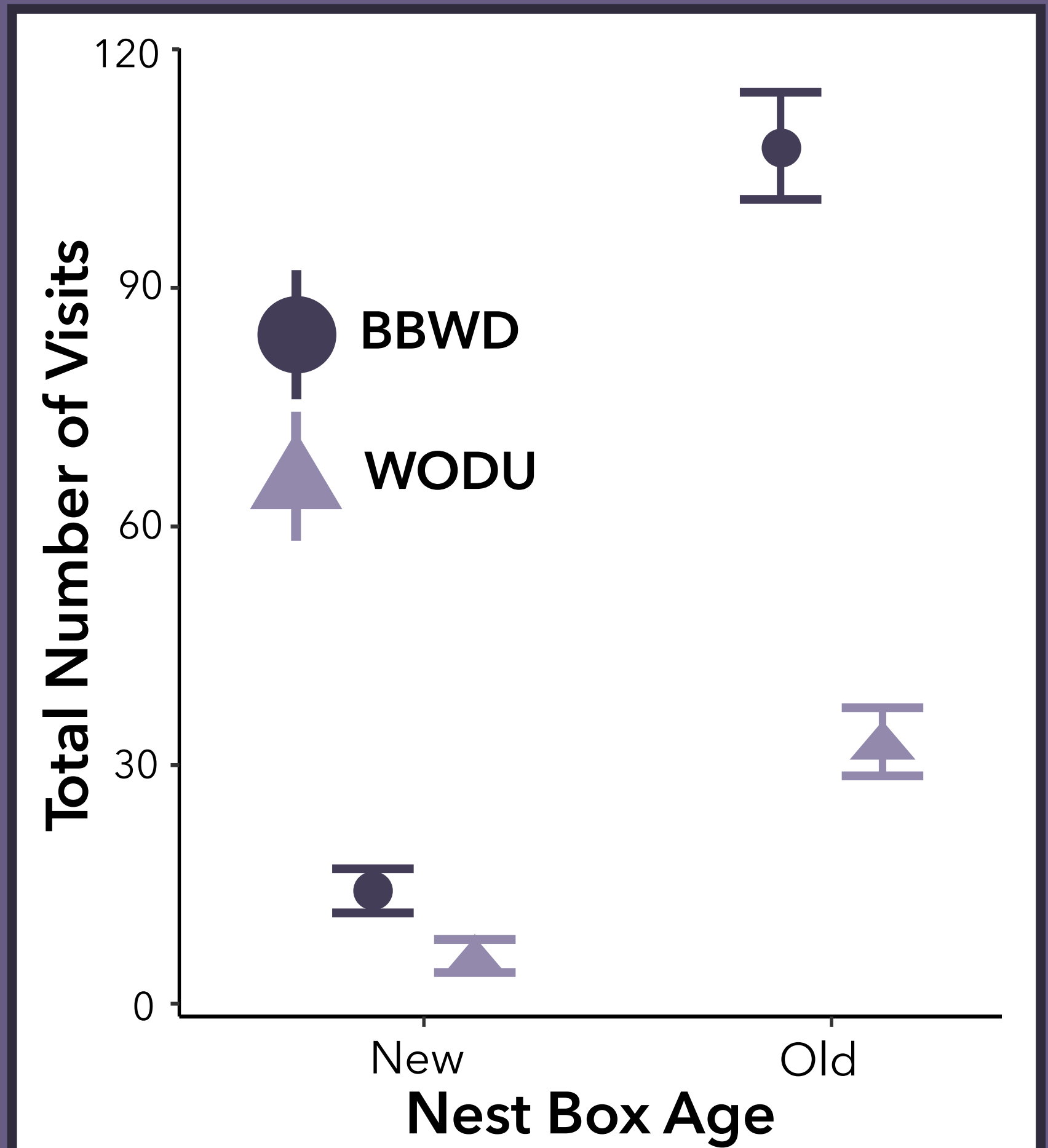
## Results

**48%** of birds detected by PIT tag readers **were not caught by hand.**

Species	Total adults detected	Adults captured in 2022 (%)	Not captured in 2022		
			Adults	Duckling recruits	Total (%)
WODU	22	15 (68%)	<b>6</b>	<b>1</b>	<b>(32%)</b>
BBWD	26	10 (37%)	<b>15</b>	<b>1</b>	<b>(62%)</b>
Both	48	25 (52%)	<b>21</b>	<b>2</b>	<b>(48%)</b>

**Whistling-Ducks did not visit other nest boxes** while they had an active **nest of their own**, but Wood Ducks did.

**Whistling-Ducks preferred old nest boxes**, while Wood Ducks used old and new boxes at the same rate.



Across the entire breeding period, **Whistling-Ducks visited more unique nest boxes** than Wood Ducks.

## Discussion

- This is the **first study** to use box-mounted PIT tag readers to study **BBWD behavior**.
- The pattern of BBWD frequently visiting numerous boxes before initiating their own nest, then visiting their nest only, provides evidence for a **dual breeding strategy**.
- Many **cryptic recruits** indicates that typical field methods fail to document nearly **half of potential breeders**.
- **BBWD neophobia** for new nest boxes was surprising given their rapid range expansion and flexible breeding strategies.



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