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Northern Pintails

Late Winter Wetland Management for Waterfowl

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Managing habitat for waterfowl is a relatively common practice throughout much of the coastal zone of Texas. Large wintering populations of waterfowl concentrate throughout the coastal zone and provide hunters with a large and diverse resource. Management practices to provide food are primarily timed to attract ducks during the hunting season.

However, most ducks remain on wintering areas long after the close of the duck season in late January. In fact, late-winter and early-spring are typically a much more critical period for many duck species to acquire energy and nutrients because of physiological requirements at this time.

Take, for example, a species on which we have conducted research – the Northern Pintail. Most females pair with a male on the wintering grounds and are paired prior to migrating north to breed. This has evolved because females must juggle several energy demanding events over the next couple of months, and being paired allows the female as much time to feed, as possible, due to the male remaining alert for predators and often defending space around the female from competitors. This allows the female as much uninterrupted foraging time, as possible. The reason that she needs to increase her food intake is because of current and impending events that require considerable energy and nutrients.

First, the female will initiate a feather molt in late winter (based on our research, around early February here on the Texas Coast) that requires additional energy and nutrients to replace body feathers. Second, she will increase her food intake

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to store energy (primarily in the form of body fat) and rebuild flight muscles for her journey north that will typically cover a couple thousand miles to the Canadian prairies. During late winter and throughout migration, she will also acquire nutrients and energy to help produce a clutch of large, energy-rich eggs. Once the clutch is laid, she will remain on the nest for long periods of time and will rely on fat and protein reserves that she has stored during the preceding months to meet her maintenance needs. Therefore, late winter and spring are the most energy-demanding periods of the year for many female ducks, as they attempt to secure resources to support their juggling act of molt, migration, and reproduction.

A carry-over effect relates to events that occur during one portion of the year (winter, in this case) that can influence events in other parts of the year (migration and reproduction, in this case). Because different portions of the annual cycle are related, how we manage habitat on the wintering grounds can potentially influence how successful ducks are during other portions of the year, even when they are thousands of miles away on the breeding grounds. Thus, the condition in which we send these birds back north can influence how long it takes them to migrate, how early they arrive on the breeding grounds, and their reproductive success.

During recent research on Northern Pintails, we flew the Texas coast twice a week to monitor several hundred radio-marked female pintails. The rate of landscape change during the last week of the duck season was amazing, as many managers drained wetlands to concentrate ducks. Since the duck season was ending, there was no incentive to provide habitat for waterfowl beyond the duck season.

This was particularly noticeable during dry years, when managed water comprises much of the available habitat along the Texas coast. The response of the radio-marked pintails was also noticeable. Their movements increased substantially, as they searched for available habitat in a quickly changing landscape. Ensuring quality waterfowl habitat through February and even mid-March should be part of every serious waterfowl manager's strategy. Providing high-quality winter habitat becomes even more important as the human footprint influences habitat throughout the birds' migratory path back to the breeding grounds. Next year's bag limits and season length are determined by the number of ducks that are produced this spring.

Although habitat conditions on the breeding grounds are the largest contributor to production of ducks, at least we can send ducks back north with the best chance to capitalize on good habitat conditions. The best way to do this is through continued wetland management in late winter that produces the groceries that allow them to depart in good condition. The added bonus is that we will also be producing quality habitat for a diverse array of other wetland birds that have the same needs.