Prairie ducks return in record numbers

New York Times 1994

* sharp decline of wild duck populations over the last decade

* the restoration of lost habitat can affect wild creatures

* millions of acres of farmland in the “prairie pothole” region of the Dakotas and Montana have been converted to grassland reserves where ducks can nest in safety from predators

Prairie ducks ….. cont.

* when you put good habitat and water conditions together at the same time, you're going to produce ducks

* water attracts ducks to the landscape but water doesn't make ducks

* different species of ducks make different use of ponds and wetlands

* dabbling ducks feed in shallow water, and took a double hit when the wetlands were drained and their nesting habitat converted to farmland

  - ✓No protection for eggs and young from predators, esp fox which hunt a small area intensively

Prairie ducks ….. cont.

* although the main purpose of the program was to prevent soil erosion, it turned out that as the grasslands grew back, an abundance of thick cover was created for ducks

* the biological enrichment that followed the regrowth of grasslands has been good for other creatures…

- ✓ predators offered a broader menu: they don't have to key in on just duck eggs
- ✓ fox were controlled by coyote which hunt a wider range and plunder fewer nests

Prairie ducks ….. cont.

* the other good news for the ducks was heavy precipitation during 1993 and 1994

* the hatching of ducks went up this year… mallards need a nesting success of about fifteen percent to maintain their populations (cf. Yellow-billed Ducks)

Risk evaluation of onshore wind farms in relation to wild duck movements in the Yangtze River mouth, China. 2021

* results suggest that ducks adopt behavioural avoidance strategies in response to wind farms

* current results show that distance between ducks' geographical locations and the nearest wind turbines suggest dynamic avoidance by ducks to avoid wind farms

* ducks tend to abandon suitable habitats within or close to a wind farm, or use it less frequently than they would in the absence of the wind farm

Risk evaluation of onshore wind farms ….. cont.

* these results showed that ducks adopted a negative strategy of avoidance in response to wind farms especially when the turbines were rotating suggesting that turning off the turbines to reduce the collision risk was an unnecessary measure in coastal habitats dominated by ducks

* wind farms are expected to increase rapidly and at large scale in the future. It is therefore vital for policy makers, governmental agencies, scientists and the public to consider the behavioural avoidance of birds in response to wind farms to ensure bird conservation in coastal wetlands

Temporal and spatial patterns of breeding activity of 12 duck species (Anatidae) in the Cape Provinces, South Africa, and their implications for hunting seasons. Rob Little, et al. 1994

* South African ducks are generally solitary breeders with nests concealed in a variety of situations: in vegetation near or over water, sometimes trees, tree holes, ground holes or on cliffs

* incubation periods are relatively long and ducklings are precocial, demanding parental care throughout an extended pre-fledgling period

* the success of the clutch is therefore dependent on the survival of the parent during a long period straddling the peak breeding season

… patterns of breeding activity of 12 duck species …. cont.

* research suggests there is a time lag of 2-3 months between a precipitation threshold (ca. 50mm) leading to dispersal and the time of breeding activity for e.g. the Yellow-billed Duck. Early winter & spring breeder

* Cape Shoveler and Cape Teal peak breeding July to November

* theory that breeding is an indirect response to rainfall

- ✓increase in water levels
- ✓increased or more available food
- ✓increased cover for nesting and chick rearing

* it is apparent that most duck species are more reproductively active during the late winter and spring in the winter rainfall region

Clutch size in ducks in the south-western Cape.

Heyl, C.W. 1994.

* rainfall is generally regarded as the most important environmental variable affecting duck breeding

* temporal variation in clutch size is determined by the availability of nutrients to the female

* ducks require large quantities of nutrients to be able to reproduce. In some species the mass of the clutch approaches the weight of the female

* ducks kept under semi-captive conditions partially dependent on artificial food cf. populations in the wild

Clutch size in ducks in the south-western Cape ….. cont.

* the semi-captive population showed the lowest difference in mean clutch size throughout the breeding period possibly hinting that the wild populations were subject to sub-optimal breeding conditions, and that food quality limited their clutch size as reported for Holartic ducks

* higher autumn clutch size for Cape Teal at Strandfontein is possibly linked to food; the greatest increase in aquatic invertebrates including chironomid larvae, occur at this time of year

Annual Report Louisiana Dept of Forest & Fisheries. 2022.

* the number of duck hunters has almost halved since 2012/13

* no food for ducks – no ducks

* shrinking wetlands & rising seas. Marshland can migrate inland as seas rise, so conserve upland areas and minimise property development to ensure enough space for marshes and food

* if hunters don't have a good season, they don't hunt the following year. Or they go elsewhere. You lose more hunters, and they are the best advocates for conservation

Annual Report Louisiana Dept of Forest & Fisheries ….. cont.

* Ducks Unlimited – national group dedicated to waterfowl conservation – works to maintain the areas

* cut small crevasses or cuts into river banks to help fresh sediment-rich water flow into marshes, build small levees to reduce erosion, and build terraces to slow water flow

Harebottle DM & M Delport. 2000. Waterbird responses to management decisions at Botriviervlei, Western Cape Provine. ADU Bird Numbers 9: 2

* Cape Shoveler numbers showed drastic decline (>95%) when water levels dropped significantly, i.e. to <1m, then started to increase once water levels rose again, although data suggests that it can take up to four years for numbers to return to high levels

Western Cape State of Conservation report --- 2020

* the number of stewardship sites and total number of hectares under conservation has increased significantly in the last five years, and tremendously since 2000AD

* 1 site : 10 000 ha → 172 sites : 260 000 ha

Climate change threatens the habitat of the endangered white-winged wood duck – October 2022

* many wildlife experts say that for any conservation model to succeed, massive support is needed to develop local leadership around the study area

* a need for research on a species' local migration, and identification of important sites

Hunting decline lands ducks in the soup – BBC News 2013

* Nebraska Game & Parks Commission published research showing that organised and licenced hunting boosted the amount of money being spent on conservation. Ninety-eight percent of monies raised goes towards purchasing or leasing habitat within a National Wildlife Refuge System

* drought has had a significant impact across the US in the past few years

* "we have to be more amenable to different levels of participation – for people to shoot, view or hunt. It's about preserving ducks, habitats and the tradition of hunting. They are interdependent, I don't see how to get around one without the other two" ~ Dr Mark Vrtiska Nebraska Game & Parks Commission