Events that we have greatly enjoyed and taken for granted as important parts of our lives can cause us to feel a sharp sense of deprivation and lack of purpose when circumstances conspire against us and suddenly curtail our activities.

The knock-on effects of this dreadful coronavirus pandemic have for many of us destroyed our normal pursuits, including for those of us who wish to inhabit the glorious National Nature Reserve which we know of as Rostherne Mere. Whilst our desired activities count for nothing against the appalling loss of life it is with disappointment that we are forced to stay away from our favoured location.

Reed Warblers at Rostherne Mere – a look back over the years

My involvement with the reserve has become part of my self-identity. From first cycling there from Stockport in 1959, through making life-long friends in the early days of the bird observatory, meeting reserve volunteer Ronald Harrison in 1960 and his conversation with Rostherne warden David Rogers in 1972 persuading him to let me ring Reed Warblers, to the publication of my book, to my dedication towards completing 50 years surveying many aspects of the ‘reedie’ population, it all means so much to me.

Now is an appropriate time to look back and contemplate the passing of the years; the highs and the lows, the trends in population size and, might I say, a small contribution to ornithology in Cheshire and to the work of the British Trust for Ornithology (BTO).

I first deployed a mist-net on the reserve in August 1972 under David’s watchful eye. Our warden was a man of few words and, on my best behaviour, I nervously enquired whether a repeat visit was a possibility. With his cautious agreement I enjoyed a few further visits.

As the 1973 season approached I was desperately hoping for a way back when Ron phoned to say that he and David were to take a boat trip around the mere to record the nests of the waterside inhabitants, Great crested Grebe, Coot and Moorhen. I was invited to join them and was ‘offered’ the facility of finding Reed Warbler nests from which I could in due course ring the nestlings. To say ‘I was made up’ was an understatement; little did I then know that this would be the mainstay of my ringing and that I would stoically continue to visit ‘my summer home’ for very many years to come.

In that first season I estimated a reedie population of 32 pairs, noting that the narrow reed beds of mere covert were in part unsuitable for nesting birds; long gaps represented lengths of potential territories. David and his successor Tom Wall realised this and they instituted the erection of cages of stock netting placed outside the stands of mere covert and also at shaw green willows. The result of this action was the speedy establishment of phragmites reed of such strength that within a few years growth destroyed the cages. This was proof indeed that the summer grazing of then numerous Canada Geese and few Grey Lags during their flightless weeks of moult was restricting the spread of reeds around the mere. In the 1980s a line of netting was placed outside the stand in the ‘shallow end’ at shaw green; the fence line was later reconstructed and moved to an outer position to accommodate the burgeoning reed bed.

The birds reacted favourably to the changes, after falling to 24 pairs in 1974 the population of reedies often increased and by the end of the millennium was in the order of 85 pairs. The waterside environment had been greatly enhanced and in recent years 50-60 pairs have been in attendance.

Nests in 1975 suffered from much predation. With the knowledge acquired from the book, ‘Reed Warblers’ (by Brown and Davies. published in 1949),I soon identified early season loss as mainly due to the actions of Reed Warblers themselves, nests often speedily disappearing. Adults return from mid- April, the previous year’s young make their appearance as adults from mid-May (I have been instrumental in proving this by examining the rings of mist-netted birds).

With the adults spread across the reed stands, often holding huge territories, the ‘new’ adults must usurp edges of claimed areas and in compressing territories have destroyed nests of eggs. Amazingly, there seems to be a fail-safe as nests of young are left unmolested in a line where others containing eggs have been ripped apart and material pilfered. An opportunistic Jay with its own chicks to feed would not be so discerning.

Reed Warblers are very resilient, soon building a new nest, often utilising damaged material. Remnants are occasionally built upon, new grasses being visibly different from the original. Nests might be damaged by high winds but loss to rain, even in extreme deluges if unaccompanied by strong wind, is rarely if ever fatal in terms of nest survival.

In addition to being prepared to acknowledge early season nest loss by embarking on 5 or 7 days of new nest building, many pairs will lay second clutches into July so that it is usually possible to find some nests containing chicks well into August.

My observations have shown that a nest, albeit rarely, may be used for follow-on clutches and I have evidence to show through mist-netting that not only have two broods been reared in one nest but ‘both sets’ of young have survived to be healthy, independent juveniles.

Obviously, seasons have varied in terms of clutch success, averaging 67% producing nest-leaving young, ranging from 37% in 1989 to almost 90% in 1980. Over a 30year span, 1974-2003, of 6063 known eggs, 4054 (66.86%) hatched and 3503 (57.78%) created nest-leaving young.

1980 with 4.46 fledged young per pair was the most prolific season, closely ahead of 4.33 (fypp) in 1984 (both seasons benefitted from many second broods). The negative year of 1977 had in the region of 1.70 chicks per pair. The average over 13 years, 1974-86, was 3.33 chicks per pair (this compared favourably with conclusions from Reed Warbler studies elsewhere).

For many years, I collated weather records – rainfall, temperature and sunshine – for May to August (this being the time when weather would most influence the breeding seasons) - and concluded that the ‘best’ seasons coincided with ‘average’ weather conditions.

Perhaps, in some seasons the adult birds are proficient at rearing chicks through the nestling stages but then experience a level of failure in promoting them through to genuine independence.

Some seasons contribute Reed Warbler young as recruits to the breeding population of later years more than others. The weather conditions on the birds’ migrations and in their over-wintering areas in tropical west Africa must cause variance in year to year survival rather than just the fitness of the birds as they prepare to leave the reserve in their natal year.

The discovery of a well-grown Cuckoo chick in a Reed Warbler nest in 1977 was a great find, a belated successor to an egg which hatched in a similar nest at Budworth Mere in 1934, found by A.W.Boyd. Initial hopes for other parasitised nests at Rostherne soon faded but eleven years later the pattern would indeed change.

In early June 1988 I found a succession of Reed Warbler nests in which 8 of the first 18 clutch starts contained a Cuckoo egg. The egg colouration indicated that 3 female Cuckoos were involved but the bird which laid olive eggs was responsible for most; this bird was to return in 1989 when she laid all of the 8 eggs located that year.

Some Reed Warbler nests were parasitized by Cuckoos over the 6 seasons to 1993 but this exotic bird of folklore is now a rare visitor to the reserve, often not recorded during entire seasons. Cuckoo egg/chick survival is very low: eggs might be rejected and evicted by the host, chicks may chill or be fatally saturated in downpours, a heavy well-developed chick may topple into the mere, the nest plant supports may buckle under the birds’ weight, a noisy chick may fall prey to a Jay.

Of the 31 known Cuckoo eggs laid on the reserve very few had real chance of survival. I ringed the chicks at appropriate ages but we never heard of any of them again.

Although a Cuckoo egg in a warbler nest is a potential disaster for the hosts I have noted occasions when, after the unwanted occupation, the offended pair have built a July nest from which they have successfully reared their own offspring.

Since the advent of the new millennium winter roosting Starlings have gathered in greater numbers than for many years and although their murmurations have been of great attraction to many observers they have led to much damage in the reed stands, breaking the dried canes of the past season. The effect of this is a tangle of reeds, not only unsightly but almost impenetrable to me in nest finding and probably not of much attraction to the warblers. As a result of this carnage I have applied less time to searching and more emphasis on catching fully-grown birds.

With a continuous programme of mist-netting I have been able to ring and retrap adult Reed Warblers and also birds of the year; in so doing, it was possible to record the survival and presence of returning adults, and to note for how long juveniles stayed on the reserve before undertaking dispersal prior to their initial migration.

In 1998 the BTO introduced single species studies, Retrapping Adults for Survival (RAS) and my project, the only one for Reed Warbler in the inaugural year, has continued annually to 2019 and is therefore greatly valued. Using Rostherne data, the BTO has calculated annual adult survival as 57% for males and 54% for females. In 2019 of 117 adults sampled 52 were known reserve returnees.

Collecting information on individually identifiable birds over many years has provided a valuable opportunity to discover extreme cases of longevity. Most small passerines have a very short life span. If you add in such factors as the need to migrate twice per year in all weathers across seas, mountains and deserts and to find a safe haven with food and shelter in the ‘off season’, you would not expect, to find any old timers (or as I call them ‘golden oldies’) amongst migrants.

My table of long-lived Rostherne Reed Warblers, 1973-2019, shows that 242 individuals survived 4 years, 84 of these were extant after 6 years, 19 after 8 years, 2 after 10 years and one at 12 years. A Cambridgeshire bird survived 13 years (at 4739 days,the oldest known of the species). Most of these birds were males.

Nationally, of only 29 birds proven to survive 10 years, the Rostherne grandee was the 3rd oldest; another of our birds was at joint 12th.

Our most exceptional birds were:- R966012 ringed 22/05/04 Ad Male last retrapped 19/06/16 (after 4411 days); E904361 ringed 04/07/93 Pull Male last retrapped 06/07/04 (after 4020 days)

Chicks leave nests at 11 or 12 days of age, hopping and clinging to waterside vegetation. By about day 16 they achieve short flight and after a further spell of reliance on parents for food they gain independence and begin to explore the swampland. By day 40 netting often records them some 200 m from their nests; by day 50 many will have ventured beyond the reserve.

In the age-range of 45-65 days they will have built up knowledge of the local area, dispersing to places like Woolston Eyes, Warrington (11 km WNW) before aligning themselves with a more southerly direction as they commence their perilous journeys.

Reports of birds found elsewhere (or on the reserve having been ringed elsewhere) are always of great interest, whether relating to birds within the UK or abroad.

Observers have found a gradual spread of Reed Warblers in Britain, including into northern England.

County Durham had no reliable records of breeding Reed Warblers since 1894 until the nesting of 2 pairs in 1976. One of the birds was mist-netted and found to carry ring JN33996 which I affixed to the leg of a Rostherne chick on 26/06/75. This bird returned to its natal colony for its second breeding season and on 6/08/77 I caught it as a brood-patched female.

As expected, some of ‘our’ Reed Warblers have been intercepted by ringers in the south or south-east of England but also by persons in France, Portugal, Spain and Morocco. Additionally, a few birds have appeared at Rostherne carrying rings acquired in Spain, Portugal, France and Belgium.

The most significant notification was of B523562, which I ringed as a 5day-old nestling on 27/07/83 and retrapped on 27/08/83. It fell to a trapper at Nouadhibou, Mauritania on 19/10/83, a distance of 4090 km when just 89 days old.

A bonus in my regular attendance on the reserve in spring and summer has been the opportunity to witness the return of Sedge Warblers as an annual breeding bird since the 1980s; more recently to record what we hope will be the establishment of Cetti’s Warblers. These events have given my activities an extra dimension.

I am grateful to The Nature Conservancy, Nature Conservancy Council, English Nature and Natural England and their respective wardens for allowing me permission to visit the National Nature Reserve and providing support to me over the years.

Malcolm Calvert

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