

Bird Notes

An Invasion of Black-tailed Native-hens Revisited

A hitherto overlooked report of a Black-tailed Native-hen, *Gallinula tibonyx*, irruption is described and a possible explanation is discussed based on an analysis of historic meteorological data.

My reviews of previous Black-tailed Native-hen irruptions (Matheson 1974, 1978) overlooked a report by Captain S.A. White in the Register of 30 June 1919. White reported on the invasion, "...it is more than 70 years since South Australia has been visited by such numbers of these birds." He reported, "... they were damaging crops on Hindmarsh Island and were especially thick on the Murray Flats. They ate lucerne and plucked fruit from trees and dry fruit from drying trays."

Earlier Morgan (1918, 1919) reported that there were thousands on a swamp near Snowtown and later that the species was seen in great numbers in several swamps near Kingston and was said to have nested in great numbers at Lake Robe. White considered that a severe drought in New South Wales had caused the irruption and that the Black-tailed Native-hen had followed watercourses such as the Murray River and Cooper Creek but "as soon as the drought breaks (in the catchments) they will go back to their old haunts and disperse over a good area." White's comments are consistent with the hypothesis that I put forward in 1974 that conditions favourable for a build up of

Black-tailed Native-hen numbers in the interiors would be followed by an irruption (dispersal) if conditions there deteriorated due to the onset of drought.

To more fully investigate the 1919 irruption I analysed monthly rainfall records for South-west Queensland and north-east South Australia for the period December 1917 to February 1919. These showed that there were exceptional rains in SW Queensland in an area bounded by Alpha, Jericho, Barcaldine, Aramac, Muttaborra, Winton, Strathdownie Station, Blackall and Tambo (Figure 1 and Table 1). In contrast conditions were very dry in the NE pastoral region of South Australia, and adjacent areas of Queensland.

Flood waters from the recording stations in Table 1 eventually reach Lake Eyre North either via Cooper Creek or the Diamantina River. Along the way there are numerous waterholes and billabongs. For example Coongie Lakes on the NE branch of Cooper Creek form a semi-permanent lake system. In addition Goyder Lagoon is on the Georgina-Diamantina catchments which have low gradients and disperse into multiple braided channels, flood plains, waterholes and wetlands (Lake Eyre Coordinating Committee, no date). These form part of the famed Channel Country, a large area of SW Queensland crossed by many river channels especially those of the Georgina and Diamantina rivers and Cooper Creek.

In January 1918 there was extensive flooding at Longreach on the Thomson River and at Tambo and Blackall on the Barcoo catchment, both tributaries of Cooper Creek. The Cooper

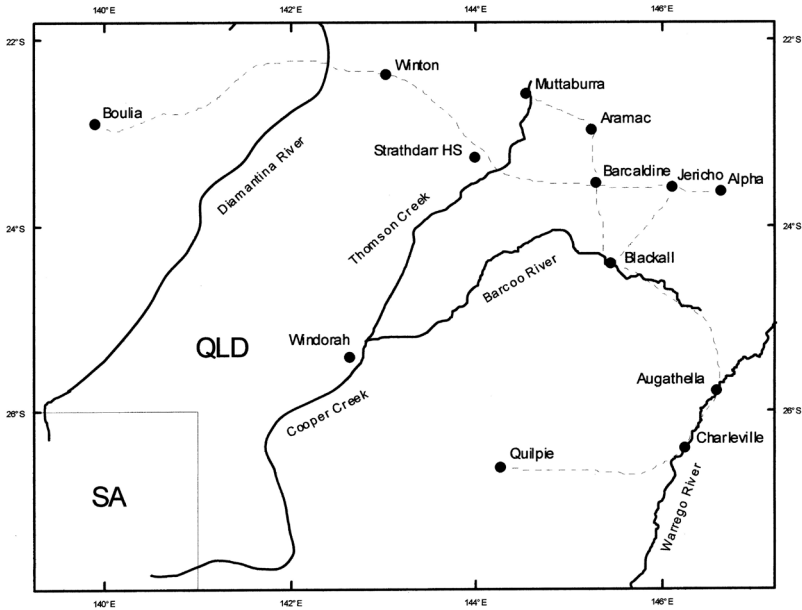


Figure 1. Map of the relevant catchment and some of the weather stations.

was reported to be 12–18 miles (20–30 km) wide before flowing into Goyder Lagoon then on to Lake Eyre North via Warburton Creek. ((Bureau of Meteorology–Queensland Flood Summary 1910-1919).

Following the extensive rains and subsequent flooding in 1917–1919 it is highly probable that there was a sustained flush of annual grasses and herbs which allowed Black-tailed Native-hen numbers to build up rapidly. The subsequent dry period which followed probably resulted in the dispersal to the south as reported by White. All of the weather stations in Table 1

recorded less than 50 mm in the period May–November 1919. This episode is another example of Black-tailed Native Hen irruptions which occur from time to time, but which has been largely overlooked (see Marchant and Higgins 1993, pp. 609-615).

In January 2007 heavy rain fell in the Queensland Channel Country, for example; Bedourie 296 mm, Winton 230 mm, Boulia 174 mm, Urandangi and Longreach 187 mm, Windorah 137 mm, Barcaldine 107 mm and Quilpie 98 mm. (Bureau of Meteorology, Queensland 2007.)

Table 1. South-west Queensland rainfall 1917–1918 together with the mean annual rainfall at selected weather recording stations.

Weather Station	Mean Annual Rainfall (mm)	Rainfall for Nov 1917–Feb 1918 (mm)	Catchment
Jericho	524	860	Cooper
“Mt Ryde”	367	730	Cooper
Barcaldine	498	728	Cooper
Aramac	463	718	Cooper
Muttaborra	450	697	Cooper
Blackall	526	640	Cooper
Winton	412	620	Diamantina

Table 2. North-east South Australia and adjacent South-west Queensland rainfall 1917-1918 and mean annual rainfall at weather recording stations adjacent to those in Table 1.

Weather Station	Mean Annual Rainfall (mm)	Rainfall for Nov 1917–Feb 1918 (mm)	Catchment
Quilpie	346	209	Bulloo
Boullia	264	227	Georgina
Auguthella	530	377	Warrego
Cordillo Downs (SA)	160	134	Cooper (?)
William Creek (SA)	127	17	Douglas Creek
Innamincka (SA)	157	109	Strzelecki
Oodnadatta (SA)	176	48	Neales

Apart from Quilpie which is in the Barcoo catchment, all the other stations are in the Cooper catchment, either directly or via the Georgina or Diamantina catchments which feed into Cooper Creek. The ABC TV 7.00 pm news bulletin of 31 January 2007, reported that the January floods in Queensland were confined to the Georgina and Diamantina rivers leading to flooding in the Channel Country. Further on 6 March 2007 the ABC Radio 635 AM North and West Report in South Australia reported that Warburton Creek was flooding into Goyder Lagoon, the Diamantina was in flood and Kalamurina Station was cut in half by the flooded Warburton Creek.

Based on previous occurrences it was likely that Black-tailed Native-hen numbers would build up rapidly following the anticipated flush of green feed in the Channel Country and that they would later disperse south if an extended dry period followed. Native hens were numerous around Adelaide in 2008 (C Rogers pers comm). While irruptions can be expected when a rapid build up of Black-tailed Native-hens is followed by a prolonged dry spell, it does not necessarily follow that dry spells will always result in irruptions.

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map. All rainfall records from Climate Service Centre, Bureau of Meteorology, Adelaide, December 2006.

REFERENCES

- Lake Eyre Coordinating Committee (no date.) The Georgina/Diamantina Catchment Overview.
- Marchant, S. and Higgins, P.J. (Eds). 1993. *Handbook of Australian, New Zealand and Antarctic birds. Volume 2, Raptors to Lapwings*. Oxford University Press, Melbourne
- Matheson, W.E. 1974. The irruption of native hens in South Australia in 1972-73. *South Australian Ornithologist* 26: 151-156.
- Matheson, W.E. 1978. A further irruption of native hens in 1975. *South Australian Ornithologist* 27: 270-273.
- Morgan, A.M. 1918. Birds of Port Broughton, *South Australian Ornithologist* 3: 132-136.
- Morgan, A. M. 1919. The birds of the south-eastern part of South Australia. *South Australian Ornithologist* 4: 7-20.
- White, S.A. 1919. A Bird Invasion. *The Register*, Adelaide, 30 January 1919, page 8, column 6.

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