

OBSERVATION AND BREEDING RECORDS OF THE PAINTED FINCH *Emblema pictum* ASSOCIATED WITH ARTESIAN SPRINGS IN SOUTH AUSTRALIA. The Painted Finch is typically associated with rocky hills covered with hummock grassland (*Triodia* spp.) in central and tropical Australia (Blakers, Davies and Reilly 1984). Smaller outlier populations have been observed in the northern Flinders Ranges (Blakers, Davies and Reilly 1984), Davenport Ranges (Gee, Gee and Read 1996) and Pitjantjatjara Lands (Copley *et al.* 2003). We describe an apparently newly established colony of the Painted Finch, located between these established areas of distribution, at Hermit Hill (29°34'S, 137°25'E) in northern South Australia.

Hermit Hill is an isolated rocky outcrop surrounded by several large groups of artesian springs that provide a permanent supply of fresh to slightly brackish water. The springs support a unique association of wetland plant species (Harris 1992) that are confined to artesian springs of the Great Artesian Basin (GAB). Hermit Hill is vegetated with a sparse cover of acacia species and chenopod shrubs, with no hummock grass *Triodia* spp.

present. The springs are at the base of the hill and in Finnis Creek, which is a wide and sandy drainage line.

A small group of Painted Finches were first observed during a field survey at the Hermit Hill spring group in May 1994. A similar group was observed again at the West Finnis spring group in December 1997. The first breeding record was noted during September 2000. This nest was located adjacent to the ground on a burnt clump of cutting grass *Gahnia trifida* in a spring wetland which had been burnt two weeks prior to the visit. Four eggs were found in the nest.

During a further visit to the springs in September 2003, three additional nests were located. There were three eggs in one nest, four in another, and the third nest was empty. Chicks hatched in one nest revisited a week later. Each nest observed during 2003 was constructed on the ground amongst a low clump of salt couch *Sporobolus virginicus* only slightly larger than the nest (Figure). Two of the nests were on rocky slopes at the base of Hermit Hill adjacent to spring wetlands. The third was located on a sandy flat amongst the springs, approximately 200 m from the base of the hill. In all cases nests were



Figure. Painted Finch nest in a clump of salt couch.

constructed from salt couch, and were located after a parent bird was flushed from the nest.

Painted Finches had not been recorded previously in the Hermit Hill area, despite surveys in May and October 1983 and March 1984 undertaken for the Olympic Dam mining development (Kinhill Stearns 1984), and regular visits by the authors and colleagues during the 1980s and 1990s. During our September 2003 visit, frequent sightings were made on most days during a two week period, suggesting a population of modest size. The eruption of temporary populations beyond the species' normal range (reported in Blakers, Davies and Reilly 1984) and other vagrant observations (Parker 1969) support a notion that groups and individuals can move far. Read and Badman (1999) described the species as vagrant in the Hermit Hill area, however, our observations cover a broad range of seasons (May–December) and several years (1994–2003), suggesting the apparently new population may have become resident.

Field observations of the Painted Finch are normally associated with rocky habitats covered with hummock grass and nests are usually constructed close to the ground in hummock grass (Slater, Slater and Slater 1986). Our observations suggest a broader habitat preference than is recognised in the literature as there is no hummock grass in the vicinity of Hermit Hill. The new population described may be dependant upon the permanent water provided by the springs and the low spreading salt couch may provide a habitat substitute for hummock grass.

In November 1996, one of the authors (DPN) made a further observation of a small flock at Freeling Springs (28°04'S, 135°54'E) in the Denison Ranges, 225 km NE of Hermit Hill, in habitat identical to that described for Hermit Hill.

Our observations, along with those by Gee, Gee and Read (1996) in hummock grass habitats of the Davenport Ranges, indicate a near continuous distribution for the species on rocky outcrops between recognised populations in the Flinders Ranges and north-western South Australia.

REFERENCES

- Blakers, M., Davies, S.J.J.F. and Reilly, P.N. 1984. *The atlas of Australian birds*. RAOU and Melbourne University Press, Melbourne.
- Copley, P.B., Baker, L.M., Nesbitt, B.J., Pedler, L.P., Hopton, D. and Foulkes, J.N. 2003. Birds. In: *A biological survey of the Anangu Pitjantjatjara Lands, South Australia, 1991–2002*. A.C. Robinson, P.B. Copley, P.D. Canty, L.M. Baker and B.J. Nesbitt (eds). Biosurvey and Monitoring Section, Department for Environment and Heritage, South Australia, pp. 243–289.
- Gee, P., Gee, I. and Read, J. 1996. An annotated bird list from the Davenport Ranges, South Australia. *South Australia Ornithologist*, 32 (4 & 5), 76–81.
- Harris, C.R. 1992. Mound Springs: South Australian Conservation Initiatives. *Rangelands Journal*, 14 (2), 157–73.
- Kinhill Stearns. 1984. *Olympic Dam Project, Supplementary environmental studies – mound springs*. Roxby Management Services, Adelaide.
- Parker, S. 1969. New and interesting distribution records of central Australian birds. *South Australian Ornithologist*, 25 (3), 59–71.
- Read, J.L., and Badman, F.J. 1999. *The birds of the Lake Eyre South Region*. Lake Eyre South Monograph Series, Slaytor, W.J.H. (ed.) Volume 3. Royal Geographical Society of South Australia, Adelaide.
- Slater, P., Slater, P. and Slater, R. 1986. *The Slater field guide to Australian birds*. Lansdowne Publishing, Sydney.

*Kelli-Jo Kovac and Darren P. Niejalke:
Environment Section, WMC Olympic Dam,
PO Box 150, Roxby Downs, S.A. 5725; e-mail
<Kelli-Jo.Kovac@wmc.com>*

Received 29 September 2003; accepted 18 December 2003