- Dyer, P.K. & Hill, G.J.E. 1992 Active breeding burrows of the Wedge-tailed Shearwater in the Capricorn Group, GBR. Emu 92, 147-151.
- Ebdon, D. 1985. Statistics in Geography, 2nd edn. Basil Blackwell, Oxford.
- Fullagar, P. 1988. Wedge-tailed Shearwater. Pp. 75 in Reader's Digest Complete Book of Australian Birds, 2nd edn. Eds R. Schodde & S.C. Tidemann. Reader's Digest, Sydney.
- Gross, A.O., Moulton, J.M. & Huntington C.E. 1963. Notes on the Wedge-tailed Shearwater at Heron Island, Great Barrier Reef, Australia. Atoll Research Bulletin, 99, 1-13.
- Hammond, R. & McCullagh, P.S. 1974. Quantitative Techniques in Geography. Oxford University Press, Oxford.
- Hill, G.J.E. & Barnes, A. 1989. Census and distribution of Wedge-tailed Shearwater *Puffinus pacificus* burrows on Heron Island, November 1985. Emu 89, 135-139.
- Hill, G.J.E. & Rosier, J. 1989. Wedge-tailed Shearwaters, White Capped Noddies and tourist development on Heron Island, Great Barrier Reef Marine Park. Journal of Environmental Management 29, 107-114.
- Hulsman, K. 1984. Seabirds of the Capricornia Section, Great Barrier Reef Marine Park. Pp. 53-60 in The Capricornia Section of the Great Barrier Reef: Past, Present and Future. Eds W.T. Ward & P. Saeger. Australian Coral Reef Society, Brisbane.
- Jahnke, B.R. 1975. Population studies of some bird species

- on Masthead Island, Queensland. Queensland Naturalist 22, 67-73.
- Kikkawa, J. & Boles, W. 1976. Seabird Islands No. 15: Heron Island. Australian Bird Bander 14, 3-6.
- Lockley, R.M. 1942. Shearwaters. J.M. Dent, London.
- MapInfo, 1991. MapInfo for DOS: Version 5.0, Mapping Information Systems Corporation, New York.
- Neil, D.T. & Dyer, P.K. 1992. Habitat preference of nesting Wedge-tailed Shearwaters: the effect of soil strength. Corella 16, 34-37.
- Nelson, B. 1980. Seabirds: Their Biology and Ecology. Hamlyn, London.
- Ogden, J. 1979. Estimates of the population sizes of the Black Noddy and Wedge-tailed Shearwater at Heron Island in 1978. Sunbird 10, 33-39.
- Perrins, C.M., Harris, M.P. & Britton, C.K., 1973. Survival of Manx Shearwaters, *Puffinus puffinus*. Ibis 115, 535-548.
- Roughley, T.C. 1936. Wonders of the Great Barrier Reef. Angus & Robertson, Sydney.
- Shipway, A.K. 1969. The numbers of Terns and Shearwaters nesting on Heron Island in 1965. Emu 69, 108-109.
- Simons, T.R. 1985. Biology and Behavior of the endangered Hawaiian Dark-rumped Petrel. Condor 87, 229-245.
- Taylor, P.J. 1977. Quantitative Methods in Geography. Houghton Mifflin, Boston.
- Walker, T.A. & Hulsman K. 1989. Seabird Islands No. 196: Erskine Island, Great Barrier Reef, Queensland. Corella 13, 53-55.

The Decline of the Black Treecreeper Climacteris picumnus melanota on Cape York Peninsula

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The Black Treecreeper Climacteris picumnus melanota, the northern subspecies of the Brown Treecreeper, occurs from the Burdekin–Einasleigh divide northwards up Cape York Peninsula (Ford 1986). In the southern part of its range, from the Atherton Tablelands west to the Gulf of Carpentaria, it is still reasonably common, having been recorded during the period 1977–81 in 18 of about 21 possible one degree squares (Blakers et al. 1984). To the north, however, it was reported during the same period in only three of a possi-

ble 15 squares, all of which were near Weipa in the north-western part of the Peninsula. While Weipa was the area of greatest observer effort, sites in the centre of the Peninsula were visited almost as frequently (Blakers *et al.* 1984) and the Edward River region on the west coast was surveyed thoroughly over a period of two years (Garnett & Bredl 1985).

The apparent scarcity of Black Treecreepers through much of the Peninsula contrasts with observations earlier in the century. In October and November 1922 W. McLennan found 15 treecreeper nests and saw about 64 individuals (W. McLennan unpubl. diary: 1 nest and 12 individuals on the southern part of Silver Plains Station, and the remainder in an area 5-20 km north of Coen). The birds were noisy and easily located (White 1922). McLennan's diary suggests they had been in the same area near Coen for several years.

Donald Thomson, who travelled extensively on the Peninsula from 1928 to 1933, also found the Black Treecreeper to be common. His notes refer to it as: 'Numerous throughout savannah woodland and forest, especially in the central range country between Coen and Ebagoola, and along the length of the Archer River... Its noisy habits and characteristic "ping, ping!" at once indicates its presence.' (Thomson 1935, p. 64)

The species was also collected by Domrow (1966) near Kowanyama, 80 km south of Edward River, in October–November 1966. The species was apparently uncommon since it was only added to Domrow's list of collected birds after the paper had gone to press.

To verify the apparent contraction in the range of the Black Treecreeper between the 1920s and the 1970s we visited, between October 1992 and August 1993, all 12 sites mentioned by McLennan in his diary, most of which we were able to locate within a few 100 metres. At each of these sites we searched for the birds for at least two hours, usually in the morning at a time when they were likely to be active. It was considered that spot surveys of this nature would establish the presence of such a conspicuous and noisy species. We also traversed by car the range country between Coen, Rokeby National Park, Merapah and Ebagoola, and questioned long-term residents who had an interest in birds. We asked itinerant bird watchers visiting northern Cape York Peninsula to report any sightings of Black Treecreepers from August 1992 to October 1993. Over the same period we surveyed birds to the south of Coen on Artemis, Dixie, Kalinga, Killarney and Violetvale stations and visited Astrea, Kalpower, Mary Valley and Starke stations, Lakefield National Park and Cape Melville National Park (Altanmoui Section).

Within the areas on central Cape York Peninsula from which McLennan and Thomson had previously recorded Black Treecreepers there were no records of the species, either from sightings or calls. They were seen beside the Archer River in October 1993 (J. Winter, P. Lethbridge pers. comm.), along which Thomson had recorded them, and, in November 1993, on Kalinga Station south of Musgrave (authors' pers. obs.). There

was also one unconfirmed sighting on another station near Musgrave (J. Gordon pers. comm.) but no other residents could recall any bird that corresponded to descriptions of the species. From 1982 to 1992 it was recorded at sites at the northern end of Silver Plains Station (J. Winter, G. Harrington pers. comm.) and on Lakefield National Park (C. Blackman pers. comm.), both near the east coast and on Jardine River National Park (K. Uhlenhut pers. comm.) in the far north. These scattered sightings contrast with those of McLennan and Thomson. It appears that the Black Treecreeper is now a rare bird on Cape York Peninsula and that its range has contracted since the 1930s.

We believe the principal reason for the decline is a change in fire regime. Elsewhere in northern Australia it has been demonstrated that a shift away from traditional Aboriginal burning practices, as has been happening progressively on Cape York Peninsula since European arrival, has led to more extensive fires in the late dry season (Haynes 1985). Late fires, which often scorch the canopy, are more likely than early fires to affect the bark fauna and thus the treecreepers. However, even cool fires, if burnt at a sufficient frequency, are known to reduce the number of Black-tailed Treecreepers Climacteris melanura at Munmalary in the Northern Territory (Woinarski 1990). We therefore suspect that it is the extent of fires, rather than their intensity, that has resulted in a contraction of the treecreeper's range. The numerous early burns that characterise Aboriginal burning produce a small scale patch effect, with many areas escaping fires (Haynes 1985). This would have resulted in a fine-grained mosaic of suitable and unsuitable habitat within which the treecreepers could move as conditions changed. Late fires burning in the absence of effective firebreaks now regularly burn large portions of the Cape (authors' pers. obs.; T. & S. Shephard pers. comm.; J. Gordon pers. comm.), separating refuge areas more widely than in the past. Because treecreepers are sedentary (Schodde & Tidemann 1986), recolonisation of areas furthest from refuges would be seriously impeded.

The locations of remnant populations of treecreepers suggest that they are most likely to persist in areas where fires are prevented from travelling far by natural barriers. For example, large rivers bordered by riparian rainforest that would act as firebreaks isolate most of the areas where treecreepers have been recorded recently. Mangroves, saltflats and rainforests, all features of the near-coastal environment, also constitute relatively

non-flammable vegetation that impede the spread of fire. Similarly the rivers to the west of the Atherton Tableland, where the subspecies also persists, are probably large enough to stop fires, and the area is extensively subdivided by roads and cultivation. In central Cape York Peninsula, however, there are few roads, most vegetation is flammable and most watercourses are dry by the late dry season. Thus, any fires that get away can burn unchecked over larger areas than elsewhere in the treecreeper's range. The re-establishment of the Black Treecreeper through its former range and its protection in its current habitat may therefore depend on the re-introduction of a fire regime that ensures a fine-grained mosaic of burning.

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References

Blakers, M., Davies, S.J.J.F. & Reilly, P.N. 1984. The Atlas of Australian Birds. RAOU and Melbourne University Press.

Domrow, R. 1966. Rhinonyssine nasal mite infestations in birds at Mitchell River Mission during the wet and dry seasons. Proceedings of the Linnean Society of New South Wales 91, 211-219.

Ford, J. 1986. Avian hybridization and allopatry in the region of the Einasleigh Uplands and Burdekin–Lynd Divide, north-eastern Queensland. Emu 86, 87-110.

Garnett, S.T. & Bredl, R. 1985. Birds in the vicinity of Edward River settlement. Sunbird 15, 6-23, 25-40.

Haynes, C.D. 1985. The pattern and ecology of *munwag*: traditional Aboriginal fire regimes in north central Arnhemland. Proceedings of the Ecological Society of Australia 13, 203-214.

Schodde, R. & Tidemann, S.C. (eds) 1986. Reader's Digest Complete Book of Australian Birds. Reader's Digest, Sydney.

Thomson, D.F. 1935. Birds of Cape York Peninsula. Government Printer, Melbourne.

White, H.L. 1922. A collecting trip to Cape York Peninsula. Emu 22, 99-116.

Woinarski, J.C.Z. 1990. Effects of fire on the bird communities of tropical woodlands and open forests in northern Australia. Australian Journal of Ecology 15, 1-22.

Yellow-eyed Starling *Aplonis mystacea* in Central Province, Papua New Guinea

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The Yellow-eyed Starling Aplonis mystacea is one of New Guinea's little-known birds (Ogilvie-Grant 1915; Mayr 1941; Amadon 1962; Rand & Gilliard 1967; Beehler et al. 1986; Coates 1990). It has been reported from only four widely-spaced geographic areas (Fig. 1), two in Irian Jaya (a: Wanggar River; b: Mimika River), and two in Papua New Guinea (c: Kumaio, middle Turama River; and d: the upper Fly drainage: Kiunga, Tabubil, Oroville Camp, Black River, and 5 miles

below Palmer Junction) [Ogilvie-Grant 1913; Stein 1936; Rand 1938, 1942; Diamond & Raga 1976; Coates 1990; Burrows 1993; M. LeCroy *in litt.*; J.M. Diamond *in litt.*].

Herein we report observing the species on the Nagore (= Chisholm) River, Central Province, 7°54′S, 146°33′E, c. 70 m asl. This new sighting extends the species' range ESE by 330 km, and suggests that this little-known starling is more widespread than previous-