

ORNITHOLOGICAL REPORT

Fire Regime Management Project, Mt Molloy and the Effect on Bird Species and Populations

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Rainbow Bee-eater

Lloyd Nielsen
PO Box 55,
Mt Molloy Qld 4871
Ph: (07) 4094 1549
Email: lloydnielsen@ledanet.com.au
Website: www.birdingaustralia.com.au

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THE AREA

The trial area is an area of only one habitat type (ornithologically) and does not support a large, permanent variety of bird species as do some of the areas bordering on Rifle Creek in the greater Mt Molloy area where there is a diversity of habitats. A number of species pass through or visit temporarily. However, it still provides an excellent indicator of proper fire regime and its effect on birdlife.

Since the trial burning, three well-spaced visits of one hour each during early morning when all species are active have been made at the trial area. It is a section that I know well, having birded frequently in this and the surrounding areas over the past 12 years.

(A list of species which use the area as residents, at various times of the year, occasionally or rarely is enclosed).

OBSERVATIONS

Examination of the experimental plots following the trials has revealed that the recent cool burning experiment has

- left patches of standing (unburnt) grass
- left trees of all sizes with little burnt foliage
- made little difference to bird populations

COMMENTS

Remaining patches of unburnt grass: These are typical of a “cool” burn and importantly provide escape refuges for grass-dwelling birds e.g. Red-backed Fairy-wren, Golden-headed Cisticola, Painted Button-quail, (Buff-breasted Button-quail), etc during a fire and also provide ongoing refuge until the burnt areas re-grow. In addition, population numbers are not greatly effected and the birds are able to recolonises fairly quickly. When large areas are completely wiped out e.g. during a very hot late dry-season burn, re-colonisation often takes a long time, having to occur from remaining populations many kilometres away. When continuous hot fires occur, the re-establishment is prevented from gaining momentum which can lead to local extinctions. (As an example, this is happening to the unique north-eastern race of the Brown Treecreeper (*Climacteris picumnus melanotus*) right throughout Cape York Peninsula including the Mareeba–Mt Molloy area).

Left trees of all sizes with little burnt foliage: Where much of the foliage is in tact following a burn, arboreal species can return quickly to the area. Insectivorous species are able to continue with an unaffected food supply. Lemon-bellied Flycatcher, a good indicator species and a good example, is still present in normal numbers. In very hot late dry-season burns, insect life is virtually completely destroyed, even on tree trunks and limbs. (Again, such fires are blamed for the population decline of the north-eastern race of the Brown Treecreeper, a specialist tree-trunk and limb gleaner, when annihilation of all insect life has occurred). The fact that the foliage of the larger trees is still in place and growing on means that birds are able to exploit the insect and other life it supports.

Made little difference to bird populations: The “cool” burn did not destroy whole populations as does extensive very hot late dry season fires. Already there are Red-backed Fairy-wrens in the grass patches and Lemon-bellied Flycatchers hunting over the area. White-throated Honeyeaters and Blue-faced Honeyeaters were back in the eucalypts on a visit about a week after the trials.

SUMMARY

Overall, there has been minimal effect on the bird population. A few insectivorous arboreal species vacated the area for a short time but soon returned. "Cool" burns usually result in the small temporary detrimental effects being offset with some positive effects. Some species are advantaged by patchy burns e.g. ground feeders such as Double-barred Finches, Peaceful Doves, Bar-shouldered Doves, Squatter Pigeons, Pale-headed Rosella, Bush Stone-curlew, Painted Button-quail (and probably Buff-breasted Button-quail). They will usually feed out onto the burnt ground and find seed etc more easily. Even some of the grass-dwelling insectivorous birds will often feed out onto burnt areas close to the sanctuary of the remnant grass patches as regeneration commences e.g. Fairy-wrens. Some species will not feed out on large expanses of completely burnt ground with the nearby sanctuary of remaining grass patches. Laughing Kookaburras also hunt over burnt ground (by their typical watch and pounce method). It is suspected that early season "cool" fire burns probably enhance the habitat quality of the Buff-breasted Button-quail habitat.

Longer term benefits: An important factor often overlooked is that the firing at this time of year has not effected small seedlings and saplings to a great extent, thus allowing later replacement trees for the birds to grow on and become established. Hot dry-season fires usually kill all seedlings and many small saplings.

SPECIAL COMMENT

Buff-breasted Button-quail: Listed as endangered by Stephen T. Garnett & Gabriel M. Crowley in *The Action Plan for Australian Birds 2000*, the Buff-breasted Button-quail inhabits lightly grassed areas at the base of low hills, at least through the breeding season (i.e. through the Wet Season). The habitat at the trial site is typical of that from which the button-quail has so far been recorded. Though it has not been recorded from this particular block (but has been recorded from similar habitat within a short distance) I would have no doubt about its occurrence here from time to time.

It has been seen feeding out onto recently burnt ground in the Musgrave area of Cape York Peninsula following "cool" burns. It would be very unlikely that such fires would affect it and may indeed be beneficial to it. Extensive hot, dry season fires would probably have a detrimental effect on this species through destruction of extensive areas of habitat.

LIST OF BIRDS WHICH USE THE FIRE TRIAL AREA, MT MOLLOY

(English names follow the official The Taxonomy and Species of Birds of Australia and its Territories, published by the Royal Australasian Ornithologists Union).

Pacific Baza - hunts over the area - breeding pair behind nearby sports oval

Black Kite - several birds hunt over the area

Whistling Kite - a pair hunts over the area - breeds behind nearby sports oval

Square-tailed Kite - a pair hunts over the area - breeds behind nearby sports oval

Collared Sparrowhawk - a pair breeds behind the nearby oval area - probably hunts through the area

Bush Stone-curlew - common in the area and feeds out onto burnt ground

(*Buff-breasted Button-quail* - suitable habitat for this endangered species and probably occurs there at times)

Painted Button-quail - moderately common in nearby areas at times - passes through this area

Peaceful Dove - common in the area - often feeds on open burnt ground

Bar-shouldered Dove - common in the area - feeds on open burnt ground

Squatter Pigeon - sporadic in the area, rare in recent years - feeds onto patchily burnt ground

Sulphur-crested Cockatoo - occasionally passes through

Rainbow Lorikeet - feeds in flowering Eucalypts at various times of the year

Scaly-breasted Lorikeet - small numbers present - feeds in flowering Eucalypts at various times of the year

Pale-headed Rosella - passes through the trial area occasionally

Brush Cuckoo - a pair with a territory which includes the trial area - spring visitor

Fan-tailed Cuckoo - has been seen in the trial area on rare occasions in winter

Little Bronze-Cuckoo - sometimes seen in the trial area in spring but rather rare

Koel - inhabits a much greater area which includes the trial area

Channel-billed Cuckoo - inhabits a much greater area which includes the trial area

Tawny Frogmouth - a resident pair close by and uses the trial area for hunting

Australian Owlet-nightjar - a resident pair inhabits the hill above the area and hunts through it

White-rumped Swiflet - aerial feeder - flocks sometimes feed above the area

Laughing Kookaburra - a family group on the outskirts of the trial area

Blue-winged Kookaburra - sometimes seen in the trial area

Forest Kingfisher - a pair has been recorded in the trial area

Rainbow Bee-eater - occasional visitor, mostly through winter

Dollarbird - rarely in spring-summer but common along nearby creeks - occasionally hawks insects over the area

Red-backed Fairy-wren - fairly common - recorded from the trial area

Striated Pardalote - fairly common - pairs breed close by; feeds in Eucalypts through the trial area

White-throated Gerygone - occasionally moves through

Noisy Friarbird - influxes when Eucalypts in flower then common

Little Friarbird - influxes when Eucalypts in flower then common

Blue-faced Honeyeater - common - often seen near or in the trial area

White-throated Honeyeater - moderately common in the Eucalypts

Banded Honeyeater - highly nomadic but occasionally passes through

Brown Honeyeater - nomadic but occasionally in the trial area - common in Mt Molloy town

Lemon-bellied Flycatcher - present in the trial area - one of the first to return after burning

Grey-crowned Babbler - a family group sometimes passes through the trial area

Varied Sittella - a rare visitor in family groups

Rufous Whistler - regular visitor to the trial area

Leaden Flycatcher - birds pass through the trial area

Willie Wagtail - occasional records, mostly in winter

Grey Fantail - has been recorded (rarely) - a wintering species from southern Australia

Black-faced Cuckoo-shrike - nomadic and passes through the area, mostly in winter

White-bellied Cuckoo-shrike - nomadic and passes through the area, mostly in winter

White-winged Triller - rare winter visitor

Olive-backed Oriole - occasional summer visitor. Pairs nest nearby

Figbird - commonly in the area and nearby mostly through the latter months of the year

White-breasted Woodswallow - a few birds occasionally hunt insects above the area

Pied Butcherbird - rare

Magpie-lark - small nomadic parties pass through

Spangled Drongo - occasional single birds take up temporary residence

Torresian Crow - a pair recorded hunting over the trial area

Great Bowerbird - very common in Mt Molloy town and sometimes about the trial area

Double-barred Finch - occasionally seen through the trial area

Chestnut-breasted Mannikin - nomadic - flocks occasionally pass through

LLOYD NIELSEN
MT MOLLOY NTH QLD