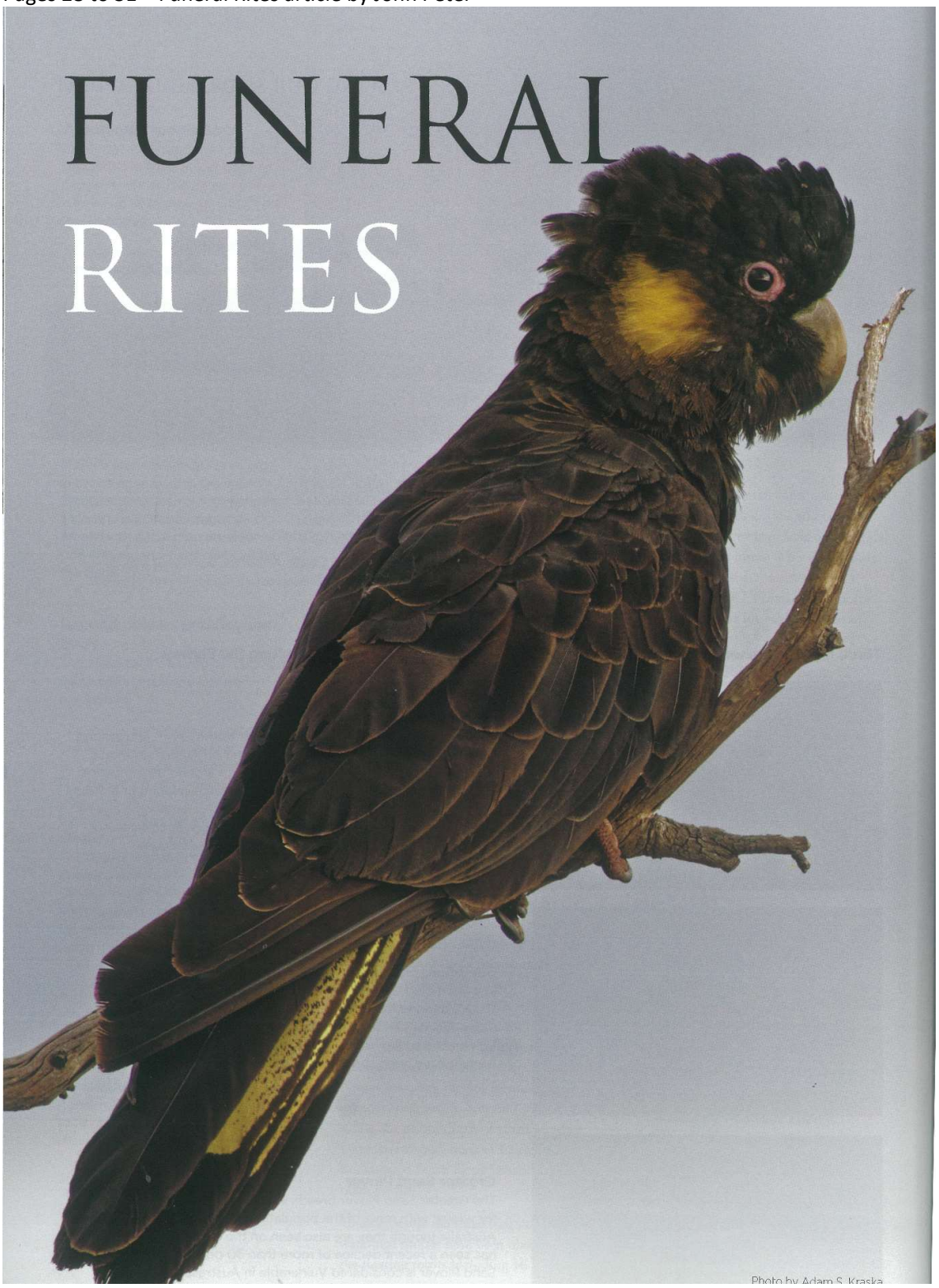
APPENDIX 6: AUSTRALIAN BIRDLIFE Vol. 8 No. 3 September 2019

Pages 28 to 31 – Funeral Rites article by John Peter



Once known as the 'Funereal Cockatoo' because of its sombre plumage and mournful cry, the Yellow-tailed Black-Cockatoo may be heading towards its own funeral. **John Peter** explains.

A mangled pine cone tumbled from near the top of the tree, bouncing off some branches on its way down, before landing with a muffled thud on the thick, russet bed of pine needles that carpeted the ground below.

Soon another did the same thing. And another. It was no accident—there were half a dozen Yellow-tailed Black-Cockatoos scattered among the outer branches of the huge pine tree, feeding quietly. Each cone was removed from its branch with a quick nip of the beak, and then held in the bird's left foot, while it was slowly and meticulously dismembered to extract the winged seeds hidden within, before being dropped earthwards.

The rustle made by the discarded cones plunging through the foliage was the loudest sound they made, but if you listened carefully, you could hear the birds talking to each other with gentle creaking notes, accompanied by a constant crackling sound as they prised more pine cones open with their strong beaks.

It's a familiar scene in many parts of south-eastern Australia, including in built-up areas, largely because introduced pine trees have become a critical source of food for these majestic birds.

In years gone by, the black-cockies relied on natives—banksias, hakeas and sheokes—whose seed pods were so hard that most other birds couldn't split them open. However, with the widespread establishment of commercial Monterey Pine plantations since the 1920s, the black-cockatoos were presented with a bounteous food source that has seen them shift their preference from natives to the exotic conifers.

Pines have become such an important resource that cockies have become dependent on them in many areas. Indeed, even in eucalypt woodlands where a few feral pine trees have sprouted as weeds among the gum trees, cockies often seek them out to feed in, even though they may comprise less than one per cent of the tree cover.

The reasons for this dependence are threefold. Firstly, a pine cone contains many more seeds than banksia, sheoke or hakea seedpods—a pine cone may hold two hundred seeds or more, while a banksia or sheoke seedpod may have dozens, and a hakea has two.

Second, expansive areas of south-eastern Australia have been turned over to Monterey Pines, with whole mountainsides supporting plantations, and, in some regions, swathes of lowlands as well. The result has been a superabundance of food, encouraging increases in cocky numbers in some areas. Naracoorte and Ballarat, for example, experienced population increases after plantations were established nearby.

And third, the woodlands and shrublands which support traditional food sources have been cleared extensively, and now occupy a fraction of their former range.

Away from plantations, farmers planting shelter-belts of pines along the boundaries of their paddocks also allowed black-cockies to occupy open areas of farmland.

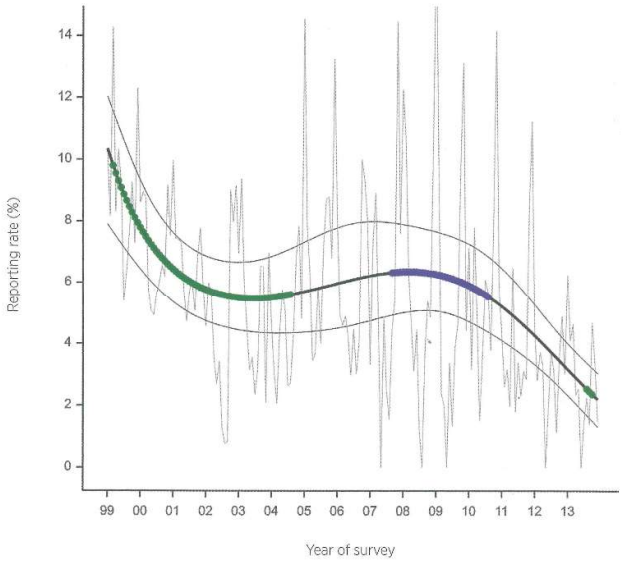
With food so widely available by the middle of the 20th century, these were halcyon days for the cockies, which had previously been reeling after decades of habitat loss through clearing for agriculture.

But it couldn't last forever. And it didn't.

By the late 1990s, many pine plantations were being harvested but not replaced—at least not with pines, but often with Tasmanian Blue Gums instead. In addition, shelter-belts planted in the early 20th century are now becoming senescent (well past their prime) and they are beginning

Right: Disappearing pine plantations are making life tough for cockies. Photo by Adam Blyth

Far right: photo by Andrew Silcocks



Above: Reporting rates of Yellow-tailed Black-Cockatoos in the South-east Mainland Bio-region declined by around 70 per cent between 1999 and 2013. (Source: *The State of Australia's Birds*, 2015). Similar rates were found in the East Coast region, though reporting rates in Tasmania appeared relatively stable.

to die or blow over in the very winds they were planted to withstand. Many farmers are now removing them, and they're often not replaced. Further, there's an effort to eradicate feral pines that are invading national parks.

Gradually, a once-reliable source of food has become scarcer, forcing cockies to travel more widely in search of food.

That's not to say that Yellow-tailed Black-Cockatoos haven't always wandered. They are traditionally altitudinal migrants, spending the warmer months in steep, timbered mountains, then heading down to the lowlands in autumn and winter, when they tend to move around.

It's just that they wander more now, and they're increasingly being seen in built-up areas—regional centres, the suburbs and sometimes even in the heart of the city. For example, in a study at Wolli Creek, in Sydney's south, they weren't recorded at all between 1940 and 1992; thereafter, they've been seen regularly. Similarly, in a 17-year study in Box Hill, in Melbourne's eastern suburbs, black-cockies were seen just twice in weekly surveys between 1989 and 2005; now they're seen every winter. It's a trend repeated in many towns.

Regularly seeing flocks of black-cockies in built-up areas gives the impression that their population is booming, but if a species is becoming more common in the suburbs, does it mean their overall numbers are increasing? For species like Crested Pigeon and Little Corella, yes, but with Yellow-tailed Black-Cockatoos, almost certainly not. In fact, *The State of Australia's Birds 2015* (SOAB) revealed that their population in south-eastern mainland Australia has declined significantly in recent years. Indeed, their influx into 'new' areas recently is likely to reflect their displacement into unfamiliar territory rather than an increase in their population. Most records in the suburbs are of flocks flying overhead or feeding in isolated stands of Monterey Pines—essentially flocks of refugees searching for food.

On South Australia's Eyre Peninsula, the plight of the Yellow-tailed Black-Cockatoos is even more dire. There, the population numbers in the dozens, rather than the thousands. Their former habitat of Sugar Gum woodlands has been fragmented, and they have come to rely on the seeds of introduced Aleppo Pines as their primary food source. Aleppo Pines have become so central to their survival that the movements of some subpopulations are dictated by the distribution of stands of the trees. However, like Monterey Pines further east, these conifers are regarded as environmental weeds. There was previously a program to eradicate the pines, but now, with the plight of the cockies better understood, there is a more balanced approach towards sustainable control of Aleppo Pines in concert with maintaining adequate food sources for the cockatoos.

The predicament of yellow-tails throughout their range is about more than just food—it's also about recruiting new birds into the population; in other words, breeding. Most of the pine plantations that were established across south-eastern Australia replaced native eucalypt forests or woodlands. A key ecological difference between pines and eucalypts is that eucalypts often form hollows when they're old, while pines in plantations never reach a venerable age, as they're harvested after a few decades, so hollows never form. Yellow-tailed Black-Cockatoos require large hollows to nest in, and suitable hollows are now at a premium.

Extensive clearing of old-growth eucalypt forests in the Great Dividing Range and the Otways has had a massive impact on the availability of breeding sites. And in some areas, particularly in western parts of its distribution, there has been an incursion into the breeding range of Yellow-tailed Black-Cockatoos by Galahs and corellas, which have spread out from drier country. Could their expansion be impacting on the breeding success of their Yellow-tailed relatives? Are the Yellow-tailed Black-Cockatoos losing out in the race to secure the diminishing number of suitable tree hollows? Continuing to log remaining old-growth forests can only exacerbate the issue.

The net result is fewer breeding opportunities, leading to fewer young cockies being incorporated into their numbers, so the population is probably growing older. With a low rate of recruitment of young birds, a critical threshold will be crossed one day, and we could see local populations crash as a result, at least in some regions. With the SOAB analysis in mind, this could be what we're witnessing now.

The Yellow-tailed Black-Cockatoos seem to be confronted with pretty much the same threats as Carnaby's Black-Cockatoos in the West. The main difference, at the moment, seems to be that there are more Yellow-tails. Still, there were plenty of Carnaby's not so long ago…

Is the Funereal Cockatoo heading inexorably towards its own funeral?