# fire in the CITY

Fire is a fact of life for fynbos, but the 'Muizenberg fire' of March 2015 attracted international attention thanks to its large scale in the heart of Cape Town. Burning on multiple fronts for five days, the fire spread over more than 5 000 hectares and it was only as a result of the heroic efforts of firefighters that there wasn't more loss of property. But what about its impact on birds? **Phoebe Barnard and Peter Ryan** report on the challenges and opportunities it created for fynbos birds.

The Muizenberg fire burned along virtually the entire central Peninsula mountain chain from Fish Hoek to Constantia Nek. How would the area's birds cope? During fires, birds fly ahead of the advancing flames or seek refuge in rocky outcrops where fire can't penetrate. Even at night, roosting birds flee from the fire. In fynbos, adjacent unburnt areas become crowded with birds, dripping Cape Sugarbirds and Orange-breasted Sunbirds.

After this year's burn, both those species were seen several kilometres from the mountain, and gardens in the suburbs of Tokai and Lakeside had Cape Grassbirds for the first time in 10 years. A nectar feeder in Noordhoek was besieged by sugarbirds in the two days immediately following the fire, but then they disappeared, presumably dispersing south into unburnt refugia. Sugarbirds are quite mobile – they even cross the largely inhospitable Cape Flats – but they need patches of mature proteas into which they can disperse. The large scale of the Muizenberg fire provides a challenge in this regard.

## SEASONAL BOTTLENECKS

Fynbos seasons are driven more by rainfall than temperature, and are accompanied by a predictable progression of plants in flower. Cape Sugarbirds and Orange-breasted Sunbirds breed mainly in winter, timing the dispersal of their fledglings to coincide with the peak flowering season and the spring flush of insects. By midsummer, when few fynbos plants flower, the sunbirds manage to eke out an existence, but there are no flowers large enough to support the weight of the Cape Sugarbirds. They move down to the coastal plains and, on the Cape Peninsula, into urban gardens where they face novel threats. With limited natural habitat into which they can move, many dispersing birds are killed by cats or car and window strikes. Fires mainly occur in late summer, exacerbating this bottleneck for nectarivores.

People living along the urban fringe can help by providing safe habitat and food for birds. The best option is to plant indigenous food plants such as proteas. Supplemental feeding with sugar water is not ideal, because it fosters a culture of dependency and can even spread disease; recent studies suggest that sugarbirds on the urban fringe tend to be fat and unhealthy. But feeders can offer a lifeline to birds after a large fire. Nectar specialist Mark Brown recommends providing a 10 to 25 per cent sugar solution (never xylitol), and emptying and washing out the bottle with very hot water on a daily basis. Red food colouring is not needed, although it can help to attract birds when a bottle is first put out.

## WINNERS AND LOSERS

But not all birds are disadvantaged. During the fire, Black-headed Herons arrived each morning to consume the unfortunate creatures unable to escape. Ravens and crows also took advantage of the cooked remains, while raptors such as Rock Kestrels and Jackal Buzzards benefited from the increased visibility of rodents that survived the fire. Conebushes (*Leucadendron* species) and other plants that store seeds in fireproof structures release them immediately after a fire, creating a bonanza for seed-eating birds. Cape Siskins are among the first to benefit, moving into burnt areas specifically to target these plants. And within a few weeks of the fire, the post-fire flush of fire lilies (*Cyrtanthus*) provides a welcome bonus for Malachite and Southern Double-collared sunbirds.

Birds such as pipits and lapwings, which prefer open areas that are not usually found in older fynbos, also move into burnt zones. Plain-backed Pipits are scarce on the Peninsula, yet within a week of the fire there was a flock on the plateau above Muizenberg. Fire is also essential to open up dense vegetation >

PETER RYAN (3)

top *Cape Siskins flocked into recently burnt areas to feed on seeds released after fire.*

above *Ground Woodpeckers appeared to enjoy the open ground.*

PETER RYAN (2)

above *A Malachite Sunbird laden with fire lily pollen, just two weeks after the fire.*

top *Peck's Valley, above Muizenberg, where the fire started on 1 March 2015.*

for ground-feeding species such as Ground Woodpeckers, chats and rock thrushes (and Cape Rockjumpers elsewhere in the fynbos biome). However, we were concerned how these species would cope in the aftermath of such an extensive fire.

Initial observations are encouraging. Virtually all fynbos species remain in the burnt area; only sugarbirds have disappeared. Cape Grassbirds have been pushed out of areas where the fire was very intense, but persist where some cover remains. Fynbos fires burn unevenly, sometimes with the heat penetrating deep into the soil and killing all but the largest, toughest seeds, sometimes with flames travelling lightly over the ground, merely scorching the vegetation and allowing many of the large pincushions and mimetes to survive. Such patches now abound with birds, which are more vocal than is usually the case at this time of year, presumably as they re-establish territories. It remains to be seen how their numbers hold up over the coming months.

Fynbos needs fire to rejuvenate – but not too often. If fires are too frequent, the large, long-lived plants such as proteas that rely on seeds to recover after fire (as opposed to resprouting from burned stumps) start to be lost from the system. A 10-year fire cycle is too frequent for Cape Sugarbirds, which depend on mature proteas. The ideal is to have a mosaic of patches with different post-fire ages, catering for a diversity of birds, and at least part of the landscape should support old vegetation that hasn't burned for more than 20 years.

Unfortunately the fire frequency in the south-western Cape has increased during the past half century, linked to human actions as well as climate change. Fynbos adjoining urban areas has been particularly hard hit as a result of the many fires that start along the urban fringe. Combined with the impacts of urban predators, roads and other infrastructure, alien plant invasions and pollution, the Peninsula's fynbos birds face an uncertain future. ◆

## CONGRATULATIONS!

Deon Zwiegelaar of Kleinmond, Western Cape was the winner of *The Illustrated Checklist of the Birds of the World* in the **Subscribe & Win competition** that ran in the November/December 2014 and January/February 2015 issues of the magazine.

The lucky-draw winners of a copy of Isak Pretorius's book, *How to Photograph Birds*, donated by Jacana Media, were Peter Cooke of Mbombela, Mpumalanga, Anton Schilz of Durban, KwaZulu-Natal, and Josh Kruger of Pretoria, Gauteng.