HOME ON THE RANGE

Raptor riches of the Cape Peninsula

The juxtaposition of wilderness and the urban environment is extreme on South Africa's Cape Peninsula, where more than three million people live sandwiched between the Table Mountain massif and the open Atlantic Ocean. Although justifiably world famous for its beautiful and diverse flora, the Peninsula is not renowned for its avifauna. It does, however, support healthy populations of many of the region's endemic species and, perhaps most remarkably, it is home to an amazing array of birds of prey. At least 13 raptor species are present as breeding residents on the Cape Peninsula and a further five occur as regular visitors or migrants. These birds live, largely unnoticed, in and around the urban fringes, as well as in the wilder, more remote reaches of the Peninsula. They represent a previously unrecognised, but highly significant, component of the region's natural heritage and they are integral to the uniquely diverse and accessible nature experience that awaits visitors to the area.

With the establishment of the Cape Peninsula National Park (CPNP) and ongoing associated changes in local environmental management, now is an opportune time to focus some attention on the Peninsula's raptors, document their present conservation status, and discuss ways of ensuring their continued survival.

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Peregrines defend their cliffs aggressively against all-comers. This female was photographed during a visit to her nest to measure and ring her chicks.

Above *The Cape Peninsula and environs, an area of about 1 400 square kilometres, supports about 100 pairs of cliff-nesting raptors and ravens.*

Opposite above *The Black Eagle was previously more widespread on the Cape Peninsula than it is today.*

Opposite below *An adult Black Eagle tending a chick at a new nest in the Tygerberg Hills could be a sign of better things to come…*

Mountain sentinels

The many cliff-nesting raptors that course along the great sandstone scarps of Table Mountain and the Peninsula mountain chain, and perch on the rocky ramparts that overlook the city and the sea, are probably the most prolific and conspicuous of the Peninsula's birds of prey.

As scientists researching two such cliff-nesting species, the Peregrine Falcon *Falco peregrinus* and the Rock Kestrel *F. tinnunculus*, we were initially drawn to the Cape Peninsula as a study area because of its proximity to our research base, the Fitz-Patrick Institute at the University of Cape Town. We started monitoring and observing falcon and kestrel pairs in the late 1980s and since then have conducted annual surveys of most of the available habitat for these birds, incidentally accumulating a reasonable knowledge of the populations of the other montane raptors present in the area. We've been increasingly impressed, generally encouraged, but occasionally concerned by our findings.

Raptor country

There are nearly 200 sheer rockfaces on the Cape Peninsula, totalling more than 40 kilometres of cliffs along the mountain chain from Signal Hill to Cape Point, all of which are potentially suitable for cliff-nesting birds. But the available habitat doesn't stop here. Some cliff-nesters fail to differentiate between natural cliffs and analogous, man-made structures such as quarry faces or even multi-storey buildings. On the Peninsula, most tall or prominent buildings around the urban centres are attractive to peregrines, just about any elevated structure seems suited to kestrel pairs, and disused stone quarries have proved popular with all the cliff-nesting species. This behavioural plasticity has enabled these birds, and peregrines and kestrels in particular, to move away from the mountain range and colonise the Cape Flats and coastal plain to the north of the city.

Raptor populations and ravens

We estimate that the Peninsula is currently home to about 100 breeding pairs of cliff-nesting raptors and ravens. Of this total, about 75 pairs are resident within the boundaries of the CPNP, with the remainder occurring in variously modified environments within and around the perimeter of the city. Five species are present as regular breeders: the Black Eagle, Jackal Buzzard, Peregrine Falcon, Rock Kestrel and White-necked Raven.

The Black or Verreaux's Eagle *Aquila verreauxii* population of the Peninsula is noticeably depleted. Even comparatively recent historical accounts suggest that these magnificent birds were fairly common in the area, but this is no longer the case. A number of huge stick-nests that could only have been built by this species still adorn the cliffs of the Peninsula and bear testimony to a once more substantial population. While these structures now lie unattended, their distribution suggests that perhaps as many as seven or eight pairs of these eagles formerly graced the mountain chain. Now only one pair is resident along the western reaches of Table Mountain, with a second territory active occasionally on the Karbonkelberg range near Hout Bay, and a new site recently established in a quarry to the north of the city. There is no obvious reason for this decrease in the eagle population, although habitat loss and the concomitant decline in prey availability may be implicated. Black Eagles are most easily seen from the upper station of the Table Mountain Aerial Cableway, and the Table Mountain pair often soar high over the Cape Town CBD.

Jackal Buzzards *Buteo rufofuscus* ▷

Above *The diagnostic underwing pattern of the Jackal Buzzard shows to good effect as the bird hangs in a mountain updraft.*

Opposite *A Peregrine Falcon scans the False Bay coastline for hunting opportunities.*

proved elusive on the Peninsula, and we found only three active nests during the survey period. However, repeated sightings of adult birds in the same areas at the right time of year, with observations of copulation and food-carrying, suggested a number of other breeding pairs. On this basis, we identified seven 'good' Jackal Buzzard territories, including two nests in trees adjacent to quarries. We could easily have missed a couple of cliff sites, so we set our estimate at about 10 pairs for the mountain chain. There are doubtless other tree-nesting pairs, particularly in areas where stands of large exotic trees provide ample nesting opportunities.

Generally, Jackal Buzzards are surprisingly uncommon in the area, and are most frequent in the remote, southern reaches of the CPNP – in the old Silvermine and Cape of Good Hope nature reserves – that feature tall expanses of broken, grey sandstone. As a southern African endemic, the strikingly-coloured Jackal Buzzard is a drawcard for raptorphiles and twitchers alike, and is most easily seen hanging in the wind-sheer along the ridges of the south-east coast of the Peninsula, between Simon's Town and Cape Point.

We probably secured the most reliable population estimate for peregrines, with 23 known territories and possibly a couple of additional sites yet to be found. The 16 pairs resident in the CPNP area constitute one of the highest breeding densities of peregrines in Africa, and the most substantial conserved population of this Red Data species in South Africa.

Peregrines hunt other birds in spectacular aerial strikes, and generally require a height advantage over their prospective prey from which to descend at extreme speeds in a near-vertical dive or stoop. While they often initiate hunts from the air, perch-hunting is more energetically efficient, so high cliffs (and other vantage points) with an unobstructed view over suitable hunting terrain are at a premium in any peregrine territory, and pairs on ▷

Above *Peregrines thrive in urban centres around Cape Town. This bird has been colour-ringed as part of a demographic study.*

Below *A large, sheltered nest ledge protects a brood of peregrine chicks from the cold-front systems that characterise the Cape.*

the Peninsula dominate all the taller, more imposing rockfaces. The notorious Cape weather also strongly influences nest-site selection. We found that breeding pairs prefer overhung cliffs, even quite low crags, that are sheltered from the fierce gales that sweep the Peninsula. They are prone to breeding failure at exposed nest ledges or in years with unusually cold, wet spring weather.

Peregrines can be seen virtually anywhere on the Peninsula, but perhaps most easily at the main Cape Point viewpoint, where a pair regularly hunts from the communications mast just north of the old lighthouse.

The Rock Kestrel is the most numerous of the mountain's 'Big Five'. We recorded 35 active territories, but the actual population probably exceeds 50 pairs in good years, and is definitely prone to annual fluctuations, presumably in response to changes in weather and food availability. Given this species' sensitivity to local conditions, we struggled to monitor known territories each year, and locating new nests of this small species in complex, built-up environments and in the vast expanses of rock available in the higher northern reaches of the mountain chain proved very difficult.

Rock Kestrels are ubiquitous on the Peninsula, but they are particularly abundant in the northern suburbs, and the quarries around Durbanville are probably the best places to see this species in the Cape Town area. Other good stake-outs are the western slopes of Lion's Head, or else the small cliff-line that runs above the road heading south from Kommetjie towards Scarborough.

As they are large, soaring birds that nest on cliffs and generally hold exclusive territories, we included White-necked Ravens *Corvus albicollis* in our surveys as 'honorary raptors'. However, despite appearances, they function very much as passerines, and initially we found much of their behaviour difficult to fathom. They are very active for such large birds, and pairs are always busy doing something indiscernible (possibly foraging?), that we have called 'raven stuff'. We also found their breeding biology confusing, in particular their tendency to completely relocate to different or new nests within their respective territories each season, and the disconcerting speed with which they progressed from apparently preparing a nest for breeding to piling food into four well-developed youngsters!

Despite these problems, we've developed a pretty solid estimate of raven numbers on the Peninsula. We know of 19 'nesting areas' and, allowing for some omissions, estimate the total population at a maximum of 25 pairs. Most occupy smallish, overhung cliffs within the CPNP area. Ravens typically build their nests in very sheltered situations, and their disused nests are often taken over by breeding peregrines.

Ravens can be seen foraging and patrolling in pairs or family groups in most parts of the CPNP. They are diligent scavengers of human refuse, and the upper cable station on Table Mountain or any of the more popular picnic spots along the coastal roads are probably the best places to see them.

Urban hazards

Unfortunately, pressure from the burgeoning human population on the natural areas of the Peninsula has increased exponentially in the past 10–20 years. Housing and commercial developments now cover almost all the flatter, more accessible land, and are rapidly encroaching on the mountain chain itself. Even for the die-hard, city-slicking falcon or kestrel, the urban environment is fraught with hazards.

The more obvious negative effects of development are those that directly cause mortality. For example, raptors flying at speed in built-up areas run the risk of colliding with overhead lines (electricity cables, telephone lines), vehicles and buildings. At least 70 per cent of ringed peregrines recovered on the Peninsula sustain injuries or are killed in such collisions. Also, raptors may be persecuted if they come into conflict with human interests. For example, circumstantial evidence suggests that moderate losses of homing or racing pigeons to peregrines and other bird-eating raptors (such as Black Sparrowhawk *Accipiter melanoleucus*) have been sufficient to spark a low-key campaign among pigeon-fanciers to shoot or poison these birds. Without proper regulation and management, this problem is set to escalate.

The negative effects of habitat loss and environmental pollution on cliff-nesting raptors are less obvious but probably no less important. For example, eagle, buzzard and kestrel densities are almost certainly negatively affected by the loss of foraging habitat associated with the simultaneous spread of development and alien vegetation, and the accumulation of agrochemicals and industrial toxins in the bodies of urban peregrines and kestrels probably compromises all aspects of their biology. ▷

Top *Rock Kestrel chicks in an old crow nest under the eaves of a building.*

Above *The Rock Kestrel is one of the most commonly seen small raptors on the Cape Peninsula.*

Disturbance is another telling factor. More and more people use the CPNP each year, and leisure activities such as rock-climbing and paragliding are progressively invading the sheer rockfaces and open airspace which until recently were exclusively the domain of the mountain's birds. These activities can cause damaging levels of disturbance at active nests. Thankfully, a combination of effective control by the managing authorities and co-operation from sports bodies and participants can substantially alleviate such problems. For example, in the past few years, climbing routes through sensitive areas of the CPNP have been temporarily closed, with very promising results.

Routing for raptors

We hope to secure the future of the Peninsula's raptors by developing a 'Cape Peninsula Raptor Route'. This self-guided tourist route will comprise about 10 locations between the Tygerberg Hills and Cape Point that showcase the area's raptors. Locations will vary in nature from general information signboards, positioned at nodes of tourist activity and describing the raptor species that occur along the mountain chain (and in the forests, flats and wetlands), to species-specific viewing and information sites, or even hides overlooking nesting areas. We're also considering various exciting high-tech options, such as closed-circuit TV cameras or webcams positioned at nests which will transmit live images of breeding birds to CCTV screens or an Internet website. With luck, opportunities for commercial exposure on signage and in multi-media coverage will be sufficient to attract a corporate sponsor to fund the route and its associated research and conservation costs.

The route should also serve to raise the profile of the Peninsula's raptors in future management plans for the area, and stimulate concern for the welfare of these impressive birds. Charismatic eagles, hawks and falcons have considerable potential as vehicles for conveying the basic principles of conservation. Perhaps by instilling a genuine appreciation of the aesthetic value and ecological significance of our birds of prey, we can contribute to a greater awareness of broader environmental issues, and truly keep these magnificent birds at home on the range. □

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A White-necked Raven stands sentinel over the Cape Flats.