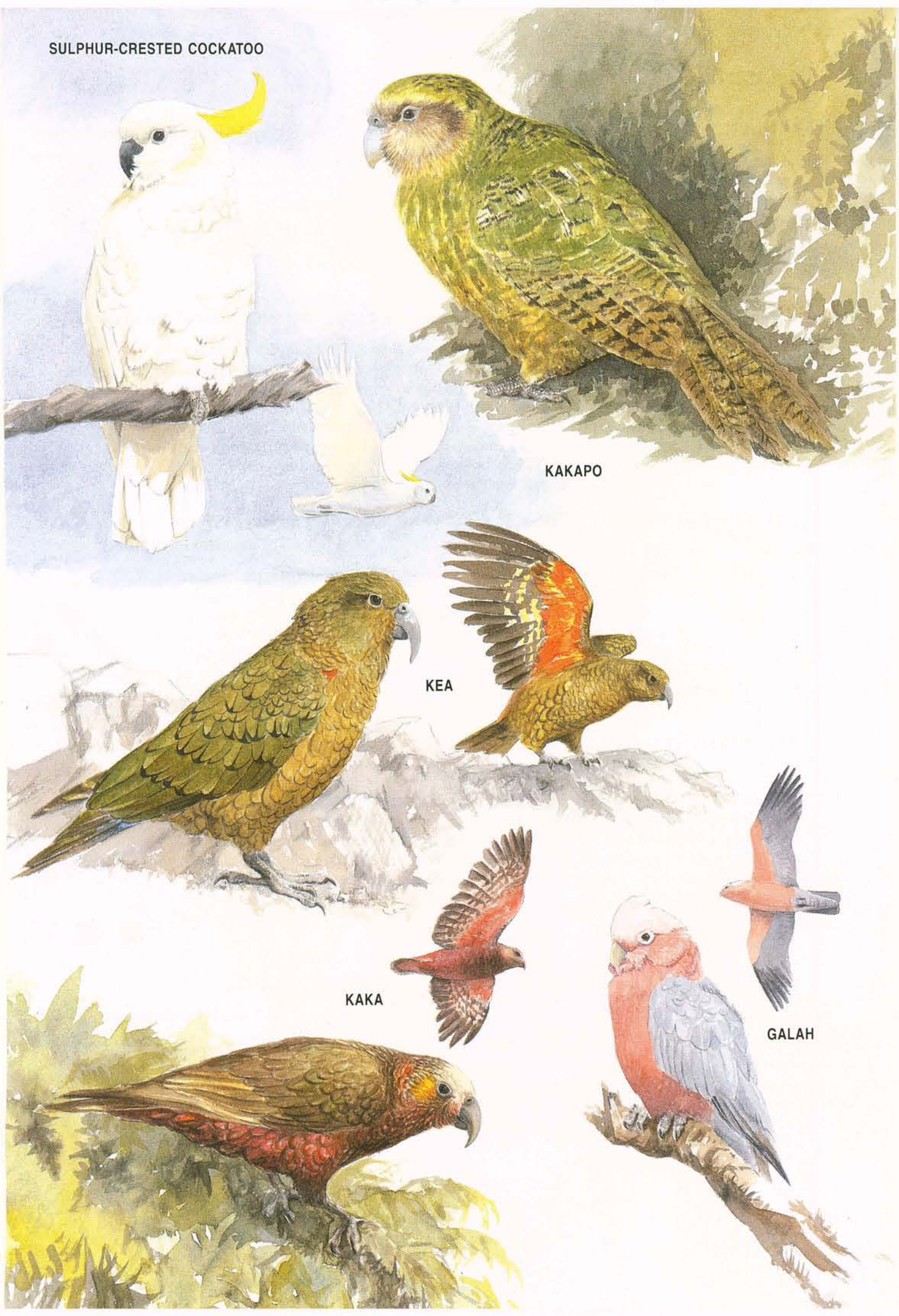
Text and images extracted from Heather, B.D. & Robertson, H.A. (2005) *The Field Guide to the Birds of New Zealand*. Penguin Books, Auckland. Pages 136, 137, 352, 355, 356.

A large cosmopolitan family of often very colourful birds, but the NZ species are relatively drab, mainly green. All have a short bill with a horn covering (cere) enclosing the nostrils. The upper mandible is strongly curved, fitting neatly over the lower mandible. Their legs are short, and their feet have two toes pointing forward and two back.

KAKA *Nestor meridionalis* **Locally common endemic**

45 cm; ♂ 525 g, ♀ 475 g. A large sometimes inquisitive *forest parrot* with crimson underwings and rump. North I birds are mainly olive brown with darker feather edges; crown paler and greyer; golden wash on cheeks; dark crimson collar, undertail and lower belly. Bill longer and more arched in the male. Juvenile has yellow base of lower mandible. South and Stewart Is birds (illustrated) brighter, and crown almost white. Noisy; many varied calls from liquid whistling notes to harsh grating calls. **Habitat:** Favours native forest and predator- and possum-free offshore islands, but a few visit gardens and orchards. **Breeding:** Sep–Apr. **[Sp 261]**



COCKATOOS and PARROTS

Cacatuidae and Psittacidae

About 330 species worldwide; 10 breed in New Zealand. Five are endemic to New Zealand, 1 is native and 4 have been introduced.

Parrots are well known for their colourful plumage and are widely held in captivity.

All have a large head and eyes, a short neck, and a short, deep bill. Mainly herbivorous, although some also eat invertebrates. The upper mandible of the bill is strongly curved, sharply pointed, and hinged at the base so that the parrot can crack nuts or other unyielding food. Parrots can use their bill as an extra limb, showing great agility at climbing. They have a large fleshy cere, surrounding the nostrils. Two toes are pointed forwards and two back, giving a strong grip. Parrots can hold food while shredding it and pass it to their mouth. Most parrots are gregarious, and many have loud, harsh voices. They mostly lay white eggs in holes in trees or in crevices in rocks.

Reading: Forshaw, J.M. & Cooper, W.T. 1978. *Parrots of the World*. Melbourne: Lansdowne.

261. KAKA *Nestor meridionalis* Plate 60

Size: 45 cm; males 475 g, females 425 g (North Island); males 575 g, females 500 g (South Island)

Geographical variation: Two subspecies: the North Island Kaka *septentrionalis*, and the South Island Kaka *meridionalis*.

Distribution: New Zealand only. Kaka were common as subfossils throughout both main islands and in middens throughout the North Island. They were abundant when Europeans arrived, but by the early 1900s they had declined to localised flocks. North Island Kaka are still in the large forest tracts from Coromandel Peninsula to the Aorangi Range in the southern Wairarapa. They are moderately common in the central North Island, especially in the Pureora and Whirinaki forests. They are most numerous on the larger offshore islands: Hen and Chickens, Great Barrier, Little Barrier, Mayor and Kapiti. Kaka commute freely between the northern islands and wander to mainland forests and towns, e.g. Northland, Auckland, Hamilton, Greytown, and to other offshore islands where they are not normally resident.

South Island Kaka are in the forested parts of the South and Stewart Islands and on some offshore islands, e.g. Chetwode, Codfish and Big South Cape, but are nowhere common. They are chiefly west of the Southern Alps and in Fiordland and southwestern Southland. They extend east of the alps into Canterbury at lower mountain passes. Birds wander occasionally to coastal Canterbury and Otago.

Population: Probably fewer than 10,000 birds, mostly on large offshore islands, especially Little Barrier, Kapiti and Codfish.

Conservation: Protected threatened endemic. The range and number of Kaka have been greatly reduced by the clearfelling and 'sustainable logging' of beech and mixed podocarp/hardwood lowland forests, competition with possums for fruit and nectar-bearing plants such as mistletoe, competition with wasps for beech honeydew in the South Island, and predation by introduced mammals. Numbers of Kaka have increased greatly on Kapiti Island in the decade since possums were eradicated. Island populations are reasonably secure, but reducing the numbers of possums, rats, stoats and wasps in mainland forest may safeguard mainland birds.

Short-term conservation measures on the mainland may be to reduce predators and provide supplementary food in a few enclaves where there are still enough potential breeders, and to provide predator-proof nest boxes and wasp-proof feeding stations.

Breeding: Nests are a shallow bowl of decayed wood dust in the bases of hollow trees or in hollow branches or trunks, and so Kaka need mature and dying trees to provide such sites. In September–January, they lay 1–**4**–5 white eggs (42 x 31 mm). The female alone incubates for 23–25 days. The eggs hatch over several days, and so at first the chicks vary in size. The male regurgitates food to the female during incubation and shares in caring for the chicks, which take 60–70 days to fledge and another 5 months to become fully independent of their parents. They first breed from 4 years old. The oldest Kaka in the wild was still breeding at 14 years old, but in captivity they have lived to over 20 years old.

Behaviour: Kaka can be conspicuous when in a flock but cryptic when feeding alone, the sound of falling pieces of wood often betraying their presence. They delight in acrobatics and aerobatics, jumping through the trees and tumbling through the air for enjoyment. Their calls are a wide variety of liquid, whistling notes and harsh, grating calls.

Feeding: Diet is mainly fruit, nectar and insects. They use their powerful bill to tear off loose bark and break up decaying wood to extract the grubs of wood-boring beetles such as the kanuka longhorn beetle, and to tap into sap from the bark of beech, mountain totara, and especially southern rata trees. They eat many kinds of seed and succulent fruit, and use their delicate brush-tipped tongue to take honeydew, and nectar from flowers of flax and trees such as rata and pohutukawa.

Reading: Beggs, J.R. & Wilson, P.R. 1987. *NZ J Ecol* 10: 143–147. Beggs, J.R. & Wilson, P.R. 1991. *Biol Cons* 56: 23–38. Moorhouse, R.J. 1991. *Acta XX IOC*: 690–696. O'Donnell, C.F.J. 1993. *Notornis* 40: 79–80. O'Donnell, C.F.J. & Dilks, P.J. 1989. *Notornis* 36: 65–71.