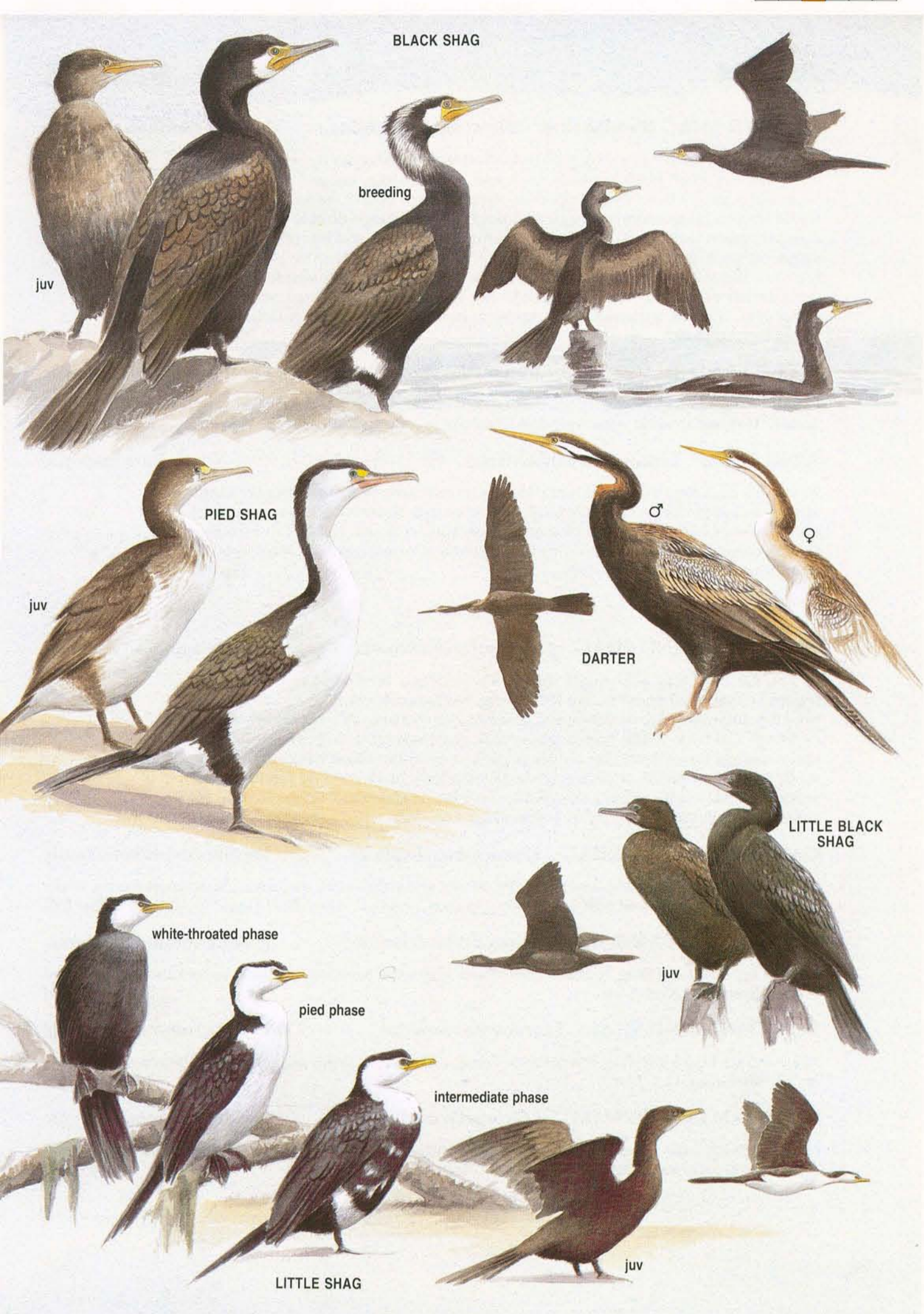
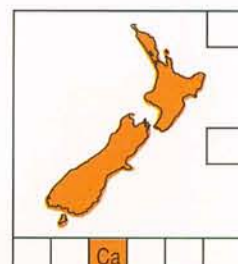


Shags are medium to large aquatic birds. Most are all black, or black above and white below. Bill long, strongly hooked at the tip. Upright posture when perched. Short legs; feet are fully webbed. Many have brightly coloured facial skin when breeding. Sexes alike. In flight, wings short and broad, and neck is extended. Swim with head held uptilted and body low in the water.

**LITTLE SHAG (Kawaupaka) *Phalacrocorax melanoleucos***

Common native

56 cm, 700 g. Smallest shag. Highly variable plumages from all black to pied, but *all have short stubby bills*, yellow in adults, dark in juveniles; eye brown; feet black. Adults have yellow facial skin and small black crest on forehead. *Tail long* compared with that of Little Black Shag. Usually feed solitarily or in small loose groups, but gregarious when roosting and nesting. **Habitat:** Lakes, farm ponds, rivers and streams, also estuaries, harbours and sheltered coastal waters. **Breeding:** Aug–May. [Sp 94]



**SHAGS**

**Phalacrocoracidae**

33 species worldwide in freshwater and marine habitats; 12 species breed in the New Zealand region, including 8 endemic species.

longest, and a web connects the inner toe with the long hind toe. In the breeding season, bare skin on the face becomes brightly coloured and contrasts with the eye and bill.

In New Zealand, all members of the Phalacrocoracidae are called shags, whereas elsewhere the term 'cormorant' is used for members of the genus *Phalacrocorax*. Foot colour varies between the three genera in New Zealand: black in the mainly freshwater *Phalacrocorax*, pink in the marine *Leucocarbo*, and yellow in the marine *Stictocarbo*.

Shags sometimes feed in flocks, but they typically roost in flocks and breed in colonies on cliffs or rocky islets, or in trees overhanging water, sometimes together with other shags.

Shags are medium to large, long-necked aquatic birds with a stiff, wedge-shaped tail, and moderately short, rounded wings, which black-footed shags hold out to dry when perched. They feed by diving from the water surface to catch fish and crustacea with their long hooked bill. They use their webbed feet to swim underwater. The outermost toe is

They have an elaborate series of ritualised courtship displays at or near the nest, a bulky platform made of sticks or seaweed. Their eggs have a chalky encrustation on the surface. Both sexes share incubation. The chicks are naked at hatching but soon develop down. Both parents regurgitate food for the chicks. If a predator approaches, chicks in tree nests overhanging water will jump well before they can fly, but they are adept at climbing back up to the nest.

**94. LITTLE SHAG *Phalacrocorax melanoleucos***

Plate 23

**Other names:** Kawaupaka, Little Pied Cormorant

**Size:** 56 cm, 700 g

**Geographical variation:** Three subspecies: *melanoleucos* breeds in Palau, Indonesia, New Guinea, Australia, New Caledonia and Solomon Islands (except Renell Island, where *brevicauda* is endemic) and was briefly established on Campbell Island; and *brevirostris* breeds in the rest of New Zealand. The New Zealand birds have a wide range of plumage forms, from pied (like those elsewhere in Australasia) to the common 'white-throated' form, smudgy adults and an almost completely black juvenile form. Paler phases are more common in the north. Pied birds make up 60% of the population in the Far North, 32% in Auckland, 15% in the rest of the North Island, but just 8% in the South Island.

bably of Australian origin) became established on Campbell Island in 1967.

**Population:** Widespread and common (5000–10,000 pairs), especially in the northern North Island. Colonies of 200+ pairs have been recorded at Lakes Rotomahana, Rotorua and Taupo. The number of Little Shags seem to be increasing, with a marked increase in numbers in Wellington Harbour between the mid-1970s and late 1990s.

**Conservation:** Protected native. Little Shags are sometimes illegally shot by fishermen who regard them as competitors for fish, and some birds are caught accidentally in fishing nets. Shags are now known to have a minimal impact on fish stocks, and few are now shot; this may have contributed to the increase in numbers of Little Shags.

**Distribution:** Breed in Australasia east of Java and the Moluccas, in New Caledonia and New Zealand. Colonies are scattered throughout the North, South and Stewart Islands, and nearby offshore islands. Little Shags are found in sheltered coastal waters, estuaries, harbours, rivers, dams and lakes up to the subalpine zone. There is much local movement between feeding and roosting or nesting areas. After breeding, they disperse widely from their colonies and large flocks congregate around good food sources (e.g. sewer outfalls) or good roosting sites (e.g. 300+ birds roosting at Freemans Pond at the base of Farewell Spit, and 300+ about Wellington Harbour, places where few are found in summer). Stragglers have been recorded from The Snares and Auckland Island, and a small colony (pro-

**Breeding:** Nest in large colonies, sometimes together with other shags, especially Pied Shags. Colonies are commonly in willows or silver poplars overhanging fresh water or estuaries, but sometimes they nest on maimai or on ledges in river gorges or on sea cliffs. The nest is usually a platform of sticks and leaves, about 30 cm in diameter. The breeding season is very long; nest-building starts in late July, and laying is August–February, with a peak in September–November. They lay 2–4–5 pale blue-green eggs (48 x 31 mm, 25 g) 2 days apart. Incubation lasts c. 4 weeks, and chicks fledge 6 weeks later.

**Behaviour:** Normally feed alone or in small groups of up to 10 birds, but often roost in flocks of up to 50 birds on logs, on piers, on rocks and in trees. They are silent away from their colonies and make little noise at their colonies, except while displaying, and a loud,

repeated 'coo' is given when an aerial predator approaches the colony.

c. 15 seconds and up to 37 seconds in deep water. Rests between dives last c. 6 seconds.

**Feeding:** Diet varies greatly with habitat but is mainly small fish (<13 cm long) and freshwater crayfish, with the occasional frog and tadpole. The main inland prey are smelt, bullies and goldfish, whereas the main marine species taken are bullies, flounder, sole and smelt. Little Shags generally feed close inshore in water less than 3 m deep; their dives last

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