

Passerines are the largest group of birds. They are small to medium sized land birds found worldwide, except on Antarctica. All species have four toes, three pointing forward and one back, well-adapted for perching. Most species are song-birds, with complex musical calls, but there are exceptions (e.g. crows). They show great diversity of form, behaviour and breeding biology.

STARLING *Sturnus vulgaris*

Abundant European introduction

21 cm, 85 g. *Short-tailed dark bird with waddling jerky walk.* Breeding adult glossy black with purple sheen on head and breast; dark green sheen and buff spangling on wings and abdomen; pointed yellow bill, bluish base in male, pinkish in female. Non-breeding head and body spotted buff and white; bill dark. Juvenile smooth grey-brown, throat paler; bill dark. Flight fast and direct, often in large co-ordinated flocks. Distinctly *pointed triangular wings*. Large winter roosts; flocks converge at dusk and disperse at dawn. Feeds on ground by jabbing bill into soil. *Noisy*; call a descending whistle: 'cheeo'; song, a rambling collection of clicks, rattles, warbles and gargles, interspersed with musical whistles. A good mimic. **Habitat:** Farmland, orchards, parks, gardens, city streets, forest margins and beaches. **Breeding:** Oct-Jan.



[Sp 319]



STARLINGS and MYNAS

Sturnidae

106 species in Africa, Europe and Asia; 2 introduced to New Zealand.

a glossy sheen of purple or green. The bill is straight and slender, and they are generally omnivorous. Most nest in holes. Their calls are highly varied, and they often mimic other species.

Medium-sized birds of open country and forest. Most species are dark, sometimes with

319. STARLING *Sturnus vulgaris*

Plate 73

Size: 21 cm, 85 g
Distribution: Natural breeding range is northern and central Europe, the Balkans, the northern Middle East and in Russia east to the Urals; many migrate south to winter on the Iberian Peninsula, the Mediterranean, North Africa, southern Middle East and Asia Minor east to India. Widely introduced around the world and now established in North America, South Africa, Australia, New Zealand and on some oceanic islands. About 1000 birds were introduced to New Zealand by Acclimatisation Societies and private individuals in 1862-83. Most introductions were successful, and Starlings soon spread throughout the country. Now abundant throughout the mainland, suitable offshore islands and the Chathams in farmland, orchards, gardens and forest edges, but rarely deep in forests. They breed on the Kermadec, Bounty, Antipodes, The Snares, Auckland and Campbell Islands; in these more remote sites they feed along sandy and rocky shores or in grassland, and nest in tree hollows or rock crevices. They have also spread to Tonga, southern Fiji, Lord Howe, Norfolk and Macquarie Islands. There is no evidence of migration within New Zealand. In winter, large flocks are often seen flying purposefully as they converge on favoured roosts; these flocks can travel 30+ km between their roosting and feeding site each day. Favoured roosts are in isolated stands of tall trees (especially macrocarpas) and on cliffs or islands.

base of a toetoe, pampas or flax, in tight-growing cypresses or in a thick tangle of vegetation in a pine tree. Starlings readily use 18 x 18 x 30 cm deep nest boxes with a 6 cm diameter entrance, especially if raised 2-3 m off the ground in an open situation. Laying is highly synchronised; in most parts of the country first eggs are laid in the second or third week of October. First breeders usually start a little later, and lost clutches are replaced, producing a second peak in early November. Second clutches are laid by 30-50% of successful breeders, and so there is a third peak from late November to the first week of December. Clutches are of 1-4-5-9 eggs, but those of over 6 eggs are usually laid by more than one female. First clutches and those laid by experienced pairs are usually larger than replacement or second clutches, or those laid by new pairs.

Population: Locally abundant and probably one of the most numerous species in New Zealand. Starlings were extremely common up to the 1940s but then declined, probably because of the widespread use of DDT to kill pasture pests. Since that insecticide has been banned, numbers have increased again.

The clear pale blue eggs (30 x 21 mm) are laid daily in the early morning. Incubation begins with the laying of the last egg and is shared by both parents during the day, but by the female alone at night, for 11-12-13 days. Both parents feed the nestlings during the fledging period of 18-20-24 days. The young are often fed for 1-2 weeks after their leaving the nest. Many young females breed at 1-2 years old, but males rarely breed until 2-3 years old. In New Zealand, adult survivorship is at least 72%, giving a life expectancy of just over 3 years; however, the oldest banded bird lived 14+ years, and in Europe the record is 23 years.

Breeding: Males visit their nest site in the early morning all year, but it is not until August-September that they stay nearby all day and defend the site from other males. The nest is a cup of dry grass, twigs and leaves, usually in the hole of a tree, cliff or building, but sometimes they will nest in the

Behaviour: Gregarious in autumn and winter, forming feeding flocks of up to 1000 birds, and they form even larger flocks as they head towards their evening roost. They often stop at staging points before moving on to the final night-time roost, which can include 1 million+ birds. In the breeding season, non-breeders form small flocks of up to 50 birds, and juveniles also form small flocks or join non-breeders shortly after becoming independent. During breeding, Starlings do not defend a feeding area but vigorously defend their nest site. The territorial song, usually delivered from a high perch near the nest, with bill

pointed upwards and half-opened wings flapping stiffly, is a lively, rambling medley of throaty warbling, clicking and gargling notes interspersed with musical whistles and imitations of other species or mechanical noises. The two birds most often imitated are Pukeko and California Quail. At large roosts, Starlings maintain a twittering chorus, often late into the night.

trees of fruit in weeks, thus depriving Kereru, Tui and Bellbirds of a good supply of food through the winter.

Feeding: Diet is a mix of invertebrates and fruit, supplemented with nectar from flowers such as flax and pohutukawa (when their forehead becomes covered in orange-red pollen). Starlings mainly eat small invertebrates, such as grass grubs and porina moth caterpillars, worms, snails and spiders, caught by probing in short pasture or grain stubble, occasionally on beaches or mudflats. Starlings sometimes hawk for insects, especially in calm, warm weather. Fallen fruits are eaten in orchards, but Starlings can cause severe localised damage to grapes and other commercial orchard fruit. In autumn, flocks of Starlings sometimes descend on bush patches where kahikatea is fruiting well and strip the

In the hand: The sex of most Starlings can be told from eye and bill colours; males have uniformly dark brown or liver-coloured eyes, whereas females have brown eyes with a narrow inner and/or outer margin of yellow or orange. In May-December, when the bill is yellow, the rami of the lower bill of males is bluish, whereas it is pink or yellowish in females. Adults moult in December-February, about a month earlier than juveniles. After autumn, adult and first-year birds that have been sexed can be recognised by the length of the iridescent portion of their throat hackles: adult males >12 mm, first-year males <10 mm; adult females >7 mm, first-year females <6 mm. In addition, first-year birds rarely have yellow on the tongue, and the tail feathers are rounded, not slightly pointed as in adults.

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