

Birds of French Island forest, woodland, heath and grassland

Martin O'Brien^{1*} & Geoff Lacey²

¹Department of Environment, Land, Water and Planning, 8 Nicholson Street,
East Melbourne VIC 3002, Australia

²School of Geography, University of Melbourne, Parkville VIC 3010, Australia

*Corresponding author. Email: Martin.O'Brien@delwp.vic.gov.au

Abstract. French Island, Western Port, Victoria, has a vital role in maintaining the population levels of several bird species in the region. The Island supports areas of native vegetation in good, intact condition. This study of the terrestrial birds (including both native and introduced species) draws on the field records of the late ornithologist Des Quinn and more recent records of many observers. One hundred and thirty-six species are listed, and historical data are provided for many of the rarer species. A few species have become locally extinct, in some cases as part of a more widespread contraction of these species. Some species have declined in numbers, others have been recorded over periods of just a few years, a few species have increased slightly in numbers, and some have appeared recently for the first time.

Introduction

French Island is rich in terrestrial birds (136 species). Factors favouring this include the variety of vegetation communities and the protection provided by French Island National Park, which now covers nearly 60% of the Island. This is the only national park in Victoria totally contained on an island (Parks Victoria 1998). Located nearly 70 km south-south-east of Melbourne, French Island (see Figures 1–2) is the largest island along the Victorian coastline (Johnston 2008) and occurs within the embayment of Western Port.

Most islands have not suffered the same degree of disturbance as mainland Australia. However, they are particularly vulnerable to the impact of pests and weeds, especially on small islands (Kirkwood & O'Connor 2010). Nearby Phillip Island has been largely cleared (Seddon 1975), retaining ~23% of the original extent of native vegetation with most of this in Phillip Island Nature Parks (Phillip Island Nature Parks 2012).

French Island terrestrial habitats have been identified as of National Zoological Significance (Andrew *et al.* 1984), with particular importance for providing protected breeding areas for birds, including the rare and threatened King Quail *Excalfactoria chinensis* (Vanderzee 1995; O'Brien 2006). Andrew *et al.* (1984, p. 174) noted that French Island “provides a continuous range of habitats for the fauna of the island which today supports a higher diversity and abundance of animals than comparable areas on the mainland”.

The Island's nationally significant vegetation communities, including wetlands and bird habitat, have been recognised by Opie *et al.* (1984), Trust for Nature, Parks Victoria and the Department of Environment, Land, Water and Planning. This has led to purchase by the Department of several blocks of land and their addition to the French Island National Park (Fitzsimons & Ashe 2003; Fitzsimons *et al.* 2004, 2006, 2008).

The avifauna literature reporting on the terrestrial birds of Western Port goes back to at least 1855 (Blandowski 1857), with some observers making an attempt to record

all species that they encountered over many years (e.g. Quinn 1967a,b, 1968, 1969a,b). Various other authors have published lists of birds recorded for the Island (e.g. Mitchell & Mitchell 1975; Belcher & Hastings 1983), but some of these provide no details of where the information is sourced or critically assess the accuracy of the observations.

Des Quinn and other observers

Ornithologist Des Quinn initiated regular observation of the birds of French Island in 1963. Beginning in the spring of 1965, he went to the Island about twice a month for 3 years to carry out his bird surveys. He continued his visits, though less frequently, until 1999 (apart from a gap in 1975–1980). He drew people together and became the mentor of several aspiring birdwatchers, in particular members of Friends of French Island National Park (FOFI).

Quinn's published articles and unpublished field notes are a major source for this paper. In the field notes he listed the following people as having assisted him (in various ways) in the early years of the surveys: Frank Birt, Don Bowrey, Bob Elvish, Burt Gibbs, Reg Johnson, Richard Loyn, Bob Marston, Eddie Napoloblonski, Jim Shiells, Rod Simpson, Fred Smith, Aubrey Tucker, Doug Wade and Doug Western.

Records were also provided by other people, especially Chris Chandler (between 1971 and 1990, and since 2012). Chandler's unpublished report, 'Rare and threatened vegetation on French Island' (2002), contains information about some of the species that are now rare or locally extinct. His records for recent years throw light on the current status of several species.

Other recent records were provided by FOFI bird surveys and by various observers (see Methods). Most of the records from these and other sources have been added to the Victorian Biodiversity Atlas (2017) (VBA), the state-wide database of the Department of Environment, Land, Water and Planning.

The waders and seabirds recorded for Western Port and the wetland birds of French Island have already been

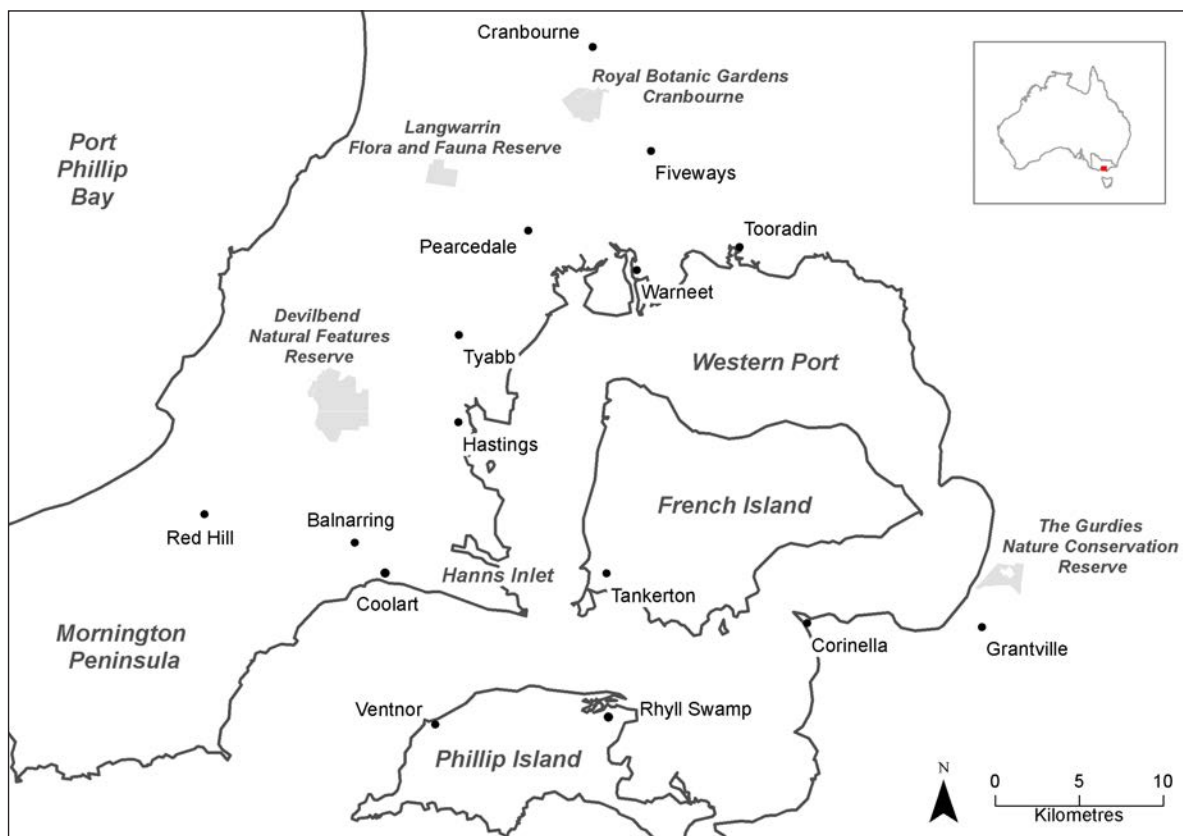


Figure 1. Western Port and surroundings, Victoria.

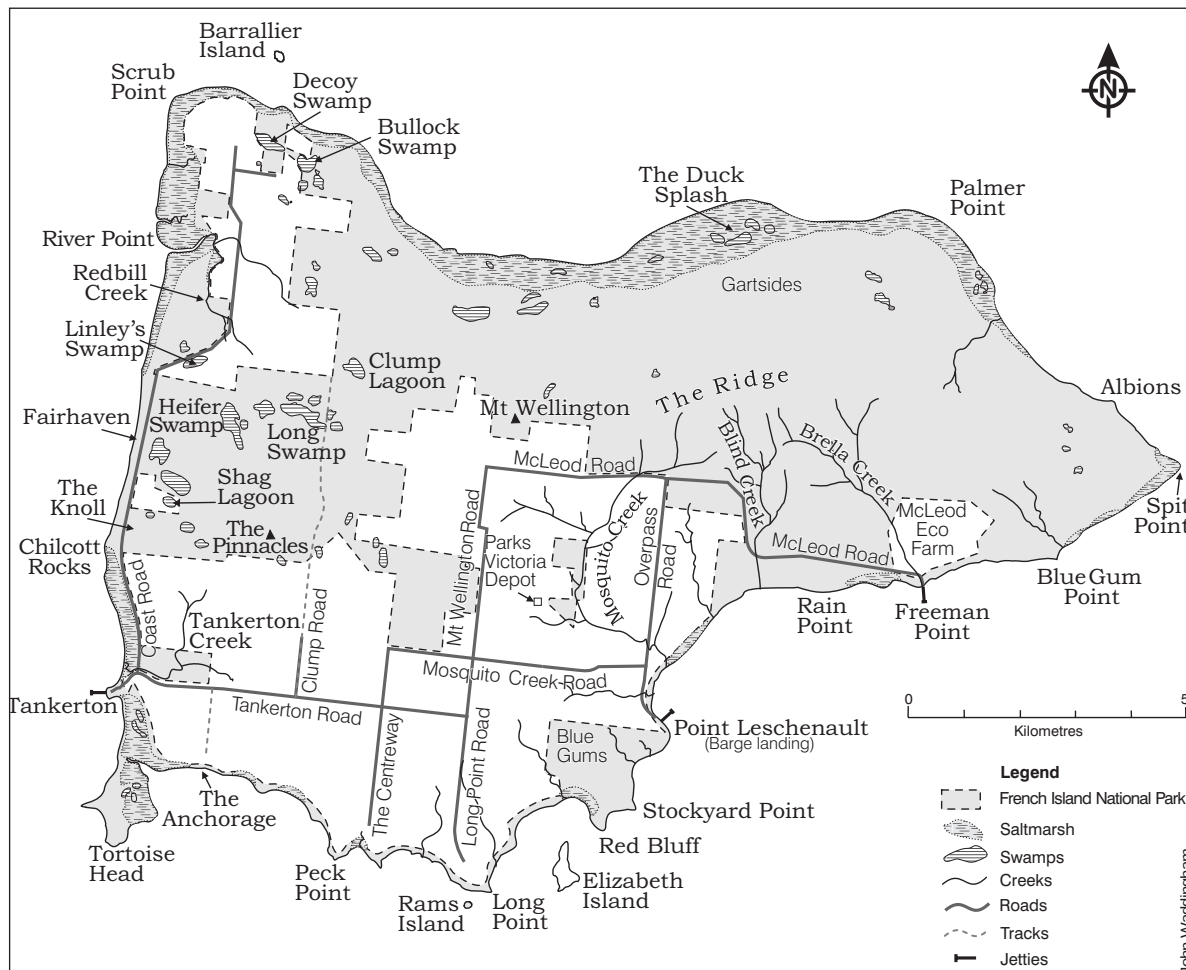


Figure 2. French Island key features and locations.



Figure 3. Habitats on French Island. (a) Messmate Forest, The Ridge; (b) Heathy Woodland near River Point; (c) Common Heath *Epacris impressa* in Heathland; (d) Grassland at Blue Gums; (e) Coast Banksia on dunes, Fairhaven; and (f) Shrubby Glasswort and flowering herbs in Coastal Saltmarsh near Tortoise Head. Photos: a–c, e: Geoff Lacey; d: Walter Mitchell; and f: Martin O’Brien

documented by other surveys and workers (e.g. Loyn *et al.* 1994). Hansen *et al.* (2011) provided a recent account for the Port’s waterbirds, and Quinn & Lacey (1999) provided a detailed account of French Island’s wetland and coastal habitats and their avifauna.

As there is no recent definitive published species list for the Island’s terrestrial birds (i.e. those that do not primarily use marine or freshwater habitats), the current paper attempts to document and critically assess the occurrence and status of the terrestrial birds in the different habitat categories on French Island.

It is important that French Island’s fauna be properly documented so that appropriate management can be undertaken. Indeed, an aim of the park management plan

(Parks Victoria 1998, p. 16) is to “Encourage relevant research and surveys to determine the distribution and habitat requirements of key species in order to identify any necessary protection or management measures”. The aim of this paper is to draw together data scattered in the literature and to comprehensively document the terrestrial birds of French Island.

Study area and methods

French Island vegetation communities

For the purposes of this study, it is convenient to divide the vegetation communities of interest on French Island

into six habitat groups, several of which contain more than one Ecological Vegetation Class (EVC). An EVC is a component of a vegetation classification system based on floristic, structural, and ecological features. The EVCs in the study area are described by Oates & Taranto (2001). The habitat groups and their corresponding EVCs are as follows.

1. Forest, herb-rich and grassy woodland

This comprises four EVCs, with Messmate *Eucalyptus obliqua* generally being the dominant species in the first three.

Herb-rich Foothill Forest occurs on and near the southern coast, mainly on basaltic soils. There is often a shrub layer, common species being Sweet Bursaria *Bursaria spinosa*, Hop Wattle *Acacia stricta* and Common Cassinia *Cassinia aculeata*. The ground layer contains grasses and a variety of herbs. There is often Common Bracken *Pteridium esculentum* and a rich array of climbers.

Lowland Forest occurs over much of the broad central ridge of the Island, on soils derived from Tertiary sediments. The understorey sometimes includes a range of heathy and other shrubs but is often open and grassy, with a range of sub-shrubs and herbs.

Damp Sands Herb-rich Woodland occurs on Quaternary deposits, at several sites near the western, northern and eastern coasts. The understorey is generally fairly open, the groundstorey being dominated by Bracken, lilies, sedges or grasses. At one site, Redbill Creek (Figure 2), Manna Gum *Eucalyptus viminalis* is the dominant species.

Grassy Woodland occurs as small remnants of Swamp Gum *E. ovata* woodland near the southern coast, generally on fairly waterlogged basaltic soils.

2. Heathland and heathy woodland

Sand Heathland and Heathy Woodland occur on deep Quaternary sands. These are distributed throughout the western part of the Island and also in broad patches on the central ridge and to the north and east of this. The vegetation is dominated by a dense, heathy shrub layer, including Prickly Tea-tree *Leptospermum continentale*, Heath Tea-tree *L. myrsinoides* and Silver Banksia *Banksia marginata*. Eucalypts, especially Messmate, are scattered sparsely throughout the heathland and are more dominant in the woodland.

Wet Heathland occurs on lower slopes or flats on infertile soils that are subject to prolonged waterlogging, often adjacent to Sand Heathland. The dominant shrubs include Prickly Tea-tree, Scrub Sheoak *Allocasuarina paludosa* and Scented Paperbark *Melaleuca squarrosa*. Sedges tend to dominate the groundstorey.

3. Wetlands and swamp scrub

There are several wetlands (permanent and ephemeral) throughout the western part of the Island and a few in the north-east and elsewhere. Generally these occur in depressions among the sand-dunes and are formed on layers of peaty sand and clay. They comprise several EVCs: Sedge Wetland, Aquatic Hermland, Aquatic Hermland/Swamp Scrub Mosaic and Wetland Formation.

Swamp Scrub occurs on poorly drained sites with higher

nutrient availability than heathland. It is dominated by dense Swamp Paperbark *Melaleuca ericifolia*, and there is often a herbaceous ground-cover.

4. Farmland and grassland

Much of the Island is cleared, or partly cleared, farmland. Some of this includes patches of trees. Two sites in the National Park, Blue Gums and Gartsides, contain Plains Grassland, formerly farmland with indigenous grasses.

5. Coastal grassland and scrub

Coastal Tussock Grassland occurs on the windswept, basalt headlands on the southern coast, in particular Tortoise Head and Long Point (Figure 2). Blue Tussock-grass *Poa poiformis* is a dominant species. There are no eucalypts but there are some emergent small trees and shrubs, often in clusters, including Black Wattle *Acacia mearnsii*, Drooping She-oak *Allocasuarina verticillata* and Tree Violet *Melicytus dentatus*.

Coastal Headland Scrub is a wind-pruned scrub that occurs on steep cliffs. It is dominated by small trees and shrubs, in particular the three just mentioned and Sweet Bursaria, Coast Beard-heath *Leucopogon parviflorus*, Common Boobialla *Myoporum insulare* and Seaberry Saltbush *Rhagodia candolleana*.

Coastal Dune Scrub/Grassland Mosaic occurs at several coastal sites. The vegetation includes small trees and shrubs, such as Coast Banksia *Banksia integrifolia*, Coast Tea-tree *Leptospermum laevigatum* and Drooping Sheoak. The groundstorey includes Hairy Spinifex *Spinifex sericeus* and Variable Groundsel *Senecio pinnatifolius*.

6. Coastal saltmarsh

Coastal Saltmarsh borders most of the northern coast, much of the western coast, and other stretches, sometimes in broad bands. It includes hermland dominated by Beaded Glasswort *Sarcocornia quinqueflora*, shrubland of Shrubby Glasswort *Tecticornia arbuscula*, and areas of mixed species, including Sea Rush *Juncus kraussii*, salt-tolerant grasses and herbs.

Methods

Published and unpublished data sources mentioning birds on French Island were accessed and examined. These included but were not limited to: the Victorian Biodiversity Atlas (VBA) database; the BirdLife Australia Birddata database (herein BirdLife database); *The Bird Observer* newsletter; *The Australian Bird Watcher* journal; field notebooks and personal letters of Des Quinn (>30 years of survey data); field observations of other birdwatchers (listed under Observers, p. 61); Victorian Ornithological Research Group (VORG) data (unpublished); FOI bird surveys; Australian Bird and Bat Banding Scheme (ABBBS) data of P. Reilly, D. Foley, J. Ipsen and I. Lane; the Birding-Aus internet chatlist; Eremaea Birds database; eBird database and any other relevant French Island records in the literature.

The abundance and breeding status of species have been assessed, using Quinn & Lacey (1999) as the main starting point. FOI bird surveys and other recent records

provided confirmation or modification. The abundance categories (Table 1) were developed by Quinn and are similar to those used by Bird Observers Club of Australia (2003). They are, of necessity, a subjective estimate; we do not have overall counts for the Island.

The conservation status categories used in this paper are confined to native species and are taken from the *Advisory List of Threatened Vertebrate Fauna in Victoria 2013* (DSE 2013).

Observers

In the annotated species list we have, where feasible, tried to identify interesting and useful records for many of the species. Published sources and some other sources are indicated. Otherwise the sources are the lists provided by Quinn (which incorporate items from other observers) and by FOFI.

Particular observers named in the following list are: Murray Bouchier (MB), Don Bowrey (DB), Andrew Browne (AB), Mike Carter (MC), Chris Chandler (CC), Scott Coutts (SC), Mick Douglas (MD), Clive Gordes (CG), Fay Gordes (FG), Ken Harris (KH), Geoff Lacey (GL), Aaron Ledden (AL), Peter Mawson (PM), Bett Mitchell (BM), Geoff Molloy (GM), Martin O'Brien (MO), Des Palmer (DP), Des Quinn (DQ), Pauline Reilly (PR), Martin Schulz (MS), Mario Semia (MSe), Andrew Silcocks (AS), Dave Stephenson (DS), and Geoff Walsh (GW).

Some early records are from Jack Hyett (JH; teacher, author, naturalist), who resided on French Island in 1939–1941. His records were unpublished but were conveyed to Quinn verbally in 1983 (i.e. >40 years later) and are included in Quinn's unpublished records.

Results

The definitions and abbreviations used to describe the current status in the annotated species list are set out in Table 1.

Annotated species list

Up to the end of 2016, a total of 136 species had been recorded from the habitats described above for French Island. The taxonomy is that of Christidis & Boles (2008).

Stubble Quail *Coturnix pectoralis* C, S, B; H 4, 5.

Brown Quail *Coturnix ypsilophora* U, B; H 3, 4, 6.

Most records are from 1985–1987, with several in 1985. The most recent record was three at Spit Point saltmarsh in December 2009 (FOFI survey).

King Quail *Excalfactoria chinensis* U, B, EN; H 2, 3.

Very cryptic, found mainly in low wet heathland and around wetlands. Most Victorian records are from French Island (VBA 2017). At least 10 birds were recorded on 24 March 1989 in the north-west of the Island by MC (Carter 1989). The most recent verified record is in October 2009, north-east of Clump Lagoon (Eremaea Birds). For details of occurrence and behaviour see O'Brien (2006).

***Indian Peafowl** *Pavo cristatus* C, B; H 1, 2.

Introduced to Western Port in the late 1800s (Jenkins 1977)

Table 1. Definitions and abbreviations used in the Annotated species list. See methods for details of observers and source of data.

Abundance

| | |
|----|---|
| A | Abundant (noted on nearly all visits to preferred habitat) |
| C | Common (noted on the majority of visits to preferred habitat) |
| U | Uncommon (present in appropriate habitat and season in small numbers) |
| R | Rare (present occasionally in very low numbers) |
| V | Vagrant (observed on very few occasions) |
| Ex | Extinct within the study area (formerly observed) |

Season

| | |
|---|-----------------------|
| S | Mainly summer visitor |
| W | Mainly winter visitor |

Breeding

| | |
|---|---|
| B | Breeding has been recorded on French Island |
|---|---|

Introduced species

| | |
|---|---------------------------------|
| * | Species introduced to Australia |
|---|---------------------------------|

Conservation status in Victoria (DSE 2013)

| | |
|----|-----------------------|
| CR | Critically Endangered |
| EN | Endangered |
| VU | Vulnerable |
| NT | Near Threatened |

Vegetation communities (habitats)

| | |
|-----|---------------------------------------|
| H 1 | Forest, herb-rich and grassy woodland |
| H 2 | Heathland and heathy woodland |
| H 3 | Wetlands and swamp scrub |
| H 4 | Farmland and grassland |
| H 5 | Coastal grassland and scrub |
| H 6 | Coastal saltmarsh |

and now common on French Island though somewhat cryptic. Most often recorded on the north-west of the Island. Unlike most Australian populations (Marchant & Higgins 1993; Cunningham *et al.* 2016), it has persisted here, possibly because there are no Red Foxes *Vulpes vulpes* on French Island.

***Common Pheasant** *Phasianus colchicus* Ex; H 1, 2.

According to DQ, this species was introduced to French Island by two residents in 1936–1939 and again in c. 1966. There were several observations in the 1960s, but the species had died out on the Island by 1984.

This species was originally introduced to Western Port by the Acclimatisation Society of Victoria in 1864 (Ryan 1906; Balmford 1978), but there are now no established populations in Victoria (VBA data).

***Rock Dove** *Columba livia* U, B; H 1, 4.

DQ recorded this species on several occasions, nearly always in flight, coming from the mainland or Phillip Island. Records include one bird on the western coast (April 1965), 50 near Chilcott Rocks (September 1972), 200 near Blue Gum Point (October 1981) and 70 over The Anchorage (May 1986).

***Spotted Dove** *Streptopelia chinensis* C, B; H 1, 2, 4.

DQ recorded one over Coast Road on 21 October 1974. Then regularly reported from 1984 to the present.

Common Bronzewing *Phaps chalcoptera* U, B; H 1.**Brush Bronzewing** *Phaps elegans* C, B; H 1, 2.**Crested Pigeon** *Ocyphaps lophotes* R; H 4, 5.

Three birds at Tankerton on 22 July 2012 (BirdLife database).

White-throated Nightjar *Eurostopodus mystacalis* R; H 1, 5.

Recorded by DQ at The Knoll (near Chilcott Rocks) from 13 January to 17 February 1968 (Quinn 1969a), and at Tankerton on 16 January 1971.

This species is considered to be extinct on the Mornington Peninsula by some observers (Schedvin 2016), but a single bird was recorded at Mt Martha in February 2016 (Conlan 2016).

Australian Owlet-nightjar *Aegotheles cristatus* R; H 1, 4.

Recorded in the Mt Wellington area by MSe in October 1983, by DQ on 3 April 1988, and by CG & FG in January 1995.

Black-shouldered Kite *Elanus axillaris* C, B; H 2–6.**Letter-winged Kite** *Elanus scriptus* V.

Recorded at Rams Island on 19 February 1977 (VBA data), 2 days after the species was also first recorded on Phillip Island (Hollands 1979), and coinciding with the state-wide irruption in 1977 (Hollands 1979, 1984).

White-bellied Sea-Eagle *Haliaeetus leucogaster* U, B, VU; H 1–6.

Previously considered to be rare in the Western Port area (Quinn 1969b). In the early 1980s, only one nesting site was known in Western Port (on French Island) (Andrew *et al.* 1984). There are now three nesting pairs on French Island and others elsewhere in the Western Port area (O'Brien & Lacey 2016).

Whistling Kite *Haliastur sphenurus* C, B; H 3–6.**Brown Goshawk** *Accipiter fasciatus* C, B; H 1–6.**Collared Sparrowhawk** *Accipiter cirrocephalus* R; H 1, 3, 4, 5.

There were several sightings by DQ and others from 1983 to 1988, mainly in open country and near Decoy Swamp. BirdLife database has three records (2004, 2009 and 2011), all near or not far from Tankerton.

Grey Goshawk *Accipiter novaehollandiae* R; H 1, 4.

Observed by MD near Clump Road in February 1988. There have been other unconfirmed sightings, e.g. a single

bird on Mosquito Creek Road on 22 March 2014 (BirdLife database).

Ranger DS observed one at the Parks Victoria depot (middle of the Island) on 11 March 2016:

It was awkwardly perched (talons fairly wide apart and body slightly crouched—I think this was because it was a windy day) about 5m off the ground in a Manna Gum, I got a really good look at it and got to within 10 m of it before it flew away. It had very distinctive yellow legs & feet with black claws.

He saw the bird again (or another one) in the same vicinity on 22 March 2016.

There is a recent Mornington Peninsula record (30 December 2015) from the Hastings foreshore (Kuitert 2016).

Spotted Harrier *Circus assimilis* R, S, B, VU; H 3, 4.

DQ had several sightings, mainly near wetlands, from 24 November 1968 to December 1971, then again on 23 January 1983. This species was recorded breeding on the Island in January 1970 and December 1971. CC observed one near The Pinnacles on 26 April 1983.

There have also been sightings from the Mornington Peninsula, e.g. one at Coolart in December 1965 (Davis & Reid 1975a). Most Victorian records are of summer migrants (Emison *et al.* 1987).

Swamp Harrier *Circus approximans* C, S, B; H 3–6.**Wedge-tailed Eagle** *Aquila audax* U, B; H 1–6.**Little Eagle** *Hieraaetus morphnoides* U; H 1–6.

Initially recorded as a winter visitor by DQ, but now regularly recorded at various sites, mainly near the sea.

Nankeen Kestrel *Falco cenchroides* C, B; H 2–6.**Brown Falcon** *Falco berigora* C, B; H 1–6.**Australian Hobby** *Falco longipennis* U, B; H 1–6.

CC observed successful breeding near Mt Wellington Road on 5 October 2015.

Black Falcon *Falco subniger* R, VU; H 3–6.

Previously considered a vagrant to Western Port (Andrew *et al.* 1984), now a rare visitor to French Island. Most sightings are near the western coast, especially Tortoise Head. There are 13 records for the Island, the most recent on 26 June 2013 at Mosquito Creek Road (BirdLife database).

On Phillip Island the species is also rare. Wheeler (1981) noted that "All sightings are single records in the general area of the Rhyll Inlet in the period between March and July 1977". There is only one recent Phillip Island record (near Ventnor on 4 March 1995) and fewer than six records for the Mornington Peninsula (VBA data).

Peregrine Falcon *Falco peregrinus* U, B; H 3–6.

Breeding behaviour (pair in courtship flight) was observed at Red Bluff by CC in September–November 2015. Breeding was recorded by AB at Tortoise Head in October 2017.

Bush Stone-curlew *Burhinus grallarius* Ex, B, EN; H 1, 4.
According to DQ (notes) and CC (unpublished 2002 report), this species was historically reasonably common (1930s–1940s), especially in the open forests in the centre and north-east, Swamp Gum woodlands in the south-west, and adjacent farmland. It disappeared from French Island in the 1940s (Andrew *et al.* 1984).

On Phillip Island, two were reported by Graham Pizzey in 1948 (recorded in Quinn's notes), and one was seen at Five Ways in November 1963 (Wheeler 1981), but the species is now also extinct on that island.

Painted Button-quail *Turnix varius* U, S, B; H 1.

Recorded in various forest and woodland habitats, e.g. by DQ at The Knoll in 1965, 1966 and 1967 (Quinn 1971), by DB farther north on the western coast in 1970, by CG near Mt Wellington in March 1986 and January 1987, by CC at Albions in November 1990, and by DQ on The Ridge in February 1991.

Little Button-quail *Turnix velox* V.

Two were seen near Tankerton on 22 February 1969 (Quinn & Wade 1970).

This species is considered a summer migrant to Victoria from farther north in Australia (Emison *et al.* 1987), but the number of records varies greatly between years. There are few records from southern Victoria (VBA data), the most recent Western Port record being from Rye on the Mornington Peninsula (Mitchell 2012).

Yellow-tailed Black-Cockatoo *Calyptorhynchus funereus* C, W; H 1, 2, 4.

Most often seen in Cluster Pines *Pinus pinaster* at McLeod Eco Farm.

Gang-gang Cockatoo *Callocephalon fimbriatum* R, W; H 1, 3, 4.

Observed by JH at Mt Wellington in 1940, also once by PM in the north-western corner of the Island. Twelve were seen by GM near Bullock Swamp in winter 1993.

Galah *Eolophus roseicapillus* U, B; H 1, 4.

Since 1970, this species has been regularly observed, generally in small numbers.

Little Corella *Cacatua sanguinea* U; H 1, 4, 5.

Originally considered a vagrant to the Western Port region (Andrew *et al.* 1984). The only records are recent. DS saw 30 in the centre of French Island on 2 November 2012. There is a BirdLife database record for Tankerton on 23 March 2014. CC saw 10 near Tankerton jetty on 29 November 2015 and 24 at The Anchorage on 25 June 2016 (Chandler 2016a).

There is only a single record for Phillip Island: 16 at Rhyll on 6 November 1997 (VBA data).

Sulphur-crested Cockatoo *Cacatua galerita* R; H 1, 4.

Very few observations. CC observed one on 27 August 1981 and two on 12 September 1982 in the south-west. One was recorded near Tankerton on 1 August 1985. DQ observed one near Mt Wellington and one near the mouth of Mosquito Creek in October and November 1986.

Cockatiel *Nymphicus hollandicus* V.

One was seen by DQ and others at Tortoise Head on 14 November 1965. DQ considered this to be a wild bird because of the inland drought pushing the species to coastal south-eastern Australia, which is supported by a similar record from Wilsons Promontory on 5 December 1965 (Cooper 1975).

Emison *et al.* (1987, p. 149) noted that "Numbers of these parrots in Victoria are particularly high during drought years in the interior".

Rainbow Lorikeet *Trichoglossus haematodus* R; H 1, 4.

The only records are recent. GW reported small numbers in the south-western corner of the Island since 2004. There are records of single birds at Tankerton on 23 March 2014 (eBird record) and near The Anchorage on 21 July 2016 (Chandler 2016b).

Musk Lorikeet *Glossopsitta concinna* R; H 1, 4, 5.

DQ saw 12 near Mt Wellington on 30 April 1966 and six in Coast Banksias at Fairhaven on 28 April 1968. One was recorded by GW in the south-western corner of the Island in 2005 and one near Tankerton on 22 July 2012 (BirdLife database).

Little Lorikeet *Glossopsitta pusilla* R; H 1, 5.

Two were seen by DQ in woodland at Redbill Creek, on 31 March and 28 April 1968. Two were observed north of Redbill Creek in April 1982 by CC.

Australian King-Parrot *Alisterus scapularis* R; H 1, 4.

FG saw one at Mt Wellington on 14 June 2015. DS observed a pair at the Parks Victoria depot on two occasions in July 2016.

Crimson Rosella *Platycercus elegans* R; H 1, 4.

Eastern Rosella *Platycercus eximius* C, B; H 1–4.

Australian Ringneck *Barnardius zonarius* V.

Possible aviary escapee (see Andrew *et al.* 1984).

Swift Parrot *Lathamus discolor* R, S, EN; H 1, 3–5.

DQ, CC and others had several records from June 1968 to October 1987, mainly near the coast and wetlands, including Chilcott Rocks, Peck Point and Long Point.

Blue-winged Parrot *Neophema chrysostoma* U; H 3–6.

Previously moderately common (Andrew *et al.* 1984), but this species has declined since c. 2003. Most records since 2005 have been from the Tortoise Head and northern saltmarsh areas. CC recorded three along Mt Wellington Road on 11 March 2016 and seven along Clump Road on 15 May 2016 (Chandler 2016c,d).

Orange-bellied Parrot *Neophema chrysogaster* R, W, CR; H 3–6.

Two were observed by DQ on the western coast on 17 April 1966 (Quinn 1967b). This species was then recorded most years until the early 2000s.

On 9 June 1968, DQ observed 32 at Shag Lagoon (Quinn & Lacey 1999, p. 67):

Many were a very rich grass-green on the upper parts, others were only slightly duller, while the remainder were duller still but nevertheless things of beauty in the sun.

They were feeding at the site's flat, spongy northwest corner. After very satisfactory views, we edged close enough to force them into flying 400 metres southwest to The Tussock, a smaller wetland, splitting into two groups, literally buzzing with excitement as they emitted their unique alarm note. When flushed again, they flew back to the Lagoon to feed briefly and then flitted onto some bracken to rest.

The species was last recorded when AL and SC observed four birds in the northern saltmarsh in late August 2006 (A. Ledden pers. comm.).

Previously 'regularly recorded' on French Island (Andrew *et al.* 1984; Quinn unpubl. data), the species is now very rare in Western Port. It is also very rare on Phillip Island (Wheeler 1981), where VORG members recorded three at Cape Woolamai on 3 March 1969. There were no further Phillip Island records until 4 July 2000, when three were seen in a similar location (BirdLife database). This decline matches that elsewhere in this species' range.

The most recent Recovery Plan for the Orange-bellied Parrot (Department of Environment, Land, Water & Planning 2016) noted that "Current knowledge suggests that habitat loss and degradation, particularly in the non-breeding range, has caused the decline" (p. 2) and that "with a very small wild population size, many historic breeding and non-breeding locations are no longer occupied" (p. 9).

Turquoise Parrot *Neophema pulchella* V, NT; H 6.

One was seen in a flock of Blue-winged Parrots in northern saltmarsh on 3 June 1997 (VBA data).

Horsfield's Bronze-Cuckoo *Chalcites basalus* C, S, B; H 1, 2, 4, 5.

Shining Bronze-Cuckoo *Chalcites lucidus* C, S, B; H 1, 2.

Pallid Cuckoo *Cacomantis pallidus* C, S, B; H 1, 2, 4, 5.

Fan-tailed Cuckoo *Cacomantis flabelliformis* C, S, B; H 1, 2, 4, 5.

Southern Boobook *Ninox novaeseelandiae* C, B; H 1, 4.

Eastern Barn Owl *Tyto javanica* U, B; H 1, 4, 5.

Historically rarely reported (1968, 1970, 1975, 1982, 1983), but numerous recent records by Parks Victoria rangers (A. Ledden pers. comm.; D. Stephenson pers. comm.). Breeding (dependent young) was reported by DQ on 9 June 1968.

Eastern Grass Owl *Tyto longimembris* R; H 5, 6.

One was seen by DP and others at Tortoise Head on 6 July 2013 and one (possibly the same bird) in the northern saltmarsh by CC on 20 September 2013.

Azure Kingfisher *Ceyx azureus* V, NT; H 5.

One was seen in mangroves at Tankerton Creek by DQ on 24 April 1966.

Laughing Kookaburra *Dacelo novaeguineae* C, B; H 1, 4.

Sacred Kingfisher *Todiramphus sanctus* U, S, B; H 1, 3–5.

DQ recorded the species in 1967–1968 and 1985–1988.

Other observers recorded it in 1987–1988 and 1998–1999, mostly on the western or southern side of the Island.

White-throated Treecreeper *Cormobates leucophaea* V.

Recorded at Heifer Swamp by Western Port Bird Observers Club (WESBOC, now BirdLife Western Port) on 20 February 1976 (S. Maddigan pers. comm.).

Superb Fairy-wren *Malurus cyaneus* R; H 4–6.

Noted by Andrew *et al.* (1984) as a vagrant on French Island. There are occasional records, mostly on or near the south-western coast (including in 1964, 1965, 1974 and 1990). The most recent record was at The Anchorage in February 2011 (VBA data).

Though rare on French Island, this species is noted by Wheeler (1981) as "a very common resident and is found in all bush areas" on Phillip Island. It is considered common on Quail Island (Hyett & Gottsch 1963) and on the southern Mornington Peninsula around Somers (Davis & Reid 1975a). In comparison, it has declined in the bayside area where Stewart (2005) noted that "numbers have dwindled in recent years and the population may be close to dying out".

White-browed Scrubwren *Sericornis frontalis* C, B; H 1–6.

Striated Fieldwren *Calamanthus fuliginosus* V; H 6.

One was seen by DQ at Redbill Creek saltmarsh on 1 August 1964, and one was seen near Blue Gum Point on 6 July 1974 (VBA data). This species was also recorded near Tankerton in 1975 and 1978 (VBA data).

Though rarely seen on French Island, the species is noted as a "resident breeder in samphire flats, reed beds and low heathlands" on the Mornington Peninsula around Hastings (Davis & Reid 1975b, p. 165). Davis & Reid (1975b, p. 165) also observed that the "species was eliminated by clearing of habitat near Coolart in 1961".

Weebill *Smicrornis brevirostris* R; H 1.

A few were seen in a mixed flock (with thornbills) by MB in woodland along Coast Road on 2 May 2005.

Striated Thornbill *Acanthiza lineata* C, B; H 1, 4.

Yellow-rumped Thornbill *Acanthiza chrysorrhoa* C, B; H 1, 4.

Buff-rumped Thornbill *Acanthiza reguloides* R, B; H 1.

Several sightings by DQ and others at or near Mt Wellington between 1966 and 1982. The VBA has records from 1980 and 1982 (both near Mt Wellington). A bushfire on the northern part of Mt Wellington in c. 1982 (CC pers. comm.) might have affected the habitat that is suitable for this species.

Brown Thornbill *Acanthiza pusilla* A, B; H 1–6.

Spotted Pardalote *Pardalotus punctatus* U, B; H 1, 4.

Striated Pardalote *Pardalotus striatus* C, B; H 1, 4.

Eastern Spinebill *Acanthorhynchus tenuirostris* C, B; H 1, 2, 4.

Yellow-faced Honeyeater *Lichenostomus chrysops* C, B; H 1, 2, 4.

Singing Honeyeater *Lichenostomus virescens* R; H 4, 5.
Seen along Tankerton Road on 17 February 1984, and at Tortoise Head on 3 November 1984; one was heard on Tankerton Hill on 25 June 1988 and one was seen along Clump Road in December 1990 (DQ records).

White-eared Honeyeater *Lichenostomus leucotis* C, B; H 1, 2, 4, 5.

White-plumed Honeyeater *Lichenostomus penicillatus* C, B; H 1, 4.

Found at many sites, but this species prefers those sites with smooth-barked eucalypts, including Manna Gum and Swamp Gum.

Noisy Miner *Manorina melanocephala* C, B; H 1, 4.

Spiny-cheeked Honeyeater *Acanthagenys rufogularis* R; H 4, 5.

Sites recorded include Tankerton Creek on 17 June 1974 and along Tankerton Road on 10 November 1984 (DQ records). CC recorded one calling on the south-western coast from April to July 2013 and on 26 April 2014. AS and others saw two on the northern hillslope of Tortoise Head on 9 November 2016.

Little Wattlebird *Anthochaera chrysoptera* C, B; H 1, 2, 4, 5.

Red Wattlebird *Anthochaera carunculata* C, B; H 1, 2, 4, 5.

White-fronted Chat *Epthianura albifrons* C, B; H 3–6.

Tawny-crowned Honeyeater *Glyciphila melanops* U, B; H 2, 5.

There were many records (e.g. 1974, 1981, 1987), especially at The Pinnacles, until c. 1990. Previously moderately common in the Island's heaths, this species is now much less common, perhaps because of low heathland (its preferred habitat) developing into heathy woodland. KH observed one at Tortoise Head on 28 November 2015, which is the most recent record.

Crescent Honeyeater *Phylidonyris pyrrhopterus* C, B; H 1, 2, 4.

New Holland Honeyeater *Phylidonyris novaehollandiae* A, B; H 1, 2, 4, 5.

White-naped Honeyeater *Melithreptus lunatus* C, B; H 1, 2, 4.

Varied Sittella *Daphoenositta chrysoptera* C, B; H 1, 4.

Black-faced Cuckoo-shrike *Coracina novaehollandiae* C, B; H 1, 4.

White-winged Triller *Lalage sueurii* R, S, B; H 1, 3, 4.

Various records in 1968–1969 and 1982–1983 from the western and central parts of the Island.

DQ noted an influx to Victoria in 1968–1969, which was also reported by Higgins *et al.* (2006).

Crested Shrike-tit *Falcunculus frontatus* V.

The only record for French Island was one seen by KH at Fairhaven Jetty on 1 December 1990, but there are numerous observations from the Mornington Peninsula (VBA data).

Olive Whistler *Pachycephala olivacea* U, B; H 1, 4.

Golden Whistler *Pachycephala pectoralis* C, B; H 1, 4.

Rufous Whistler *Pachycephala rufiventris* C, S, B; H 1, 4.

Grey Shrike-thrush *Colluricincla harmonica* C, B; H 1, 4.

Olive-backed Oriole *Oriolus sagittatus* R, S, B; H 1, 4.

Recorded occasionally. MD saw one at Parks Victoria depot on 14 April 2012. CG & FG saw two in forest along Overpass Road on 10 October 2015.

White-browed Woodswallow *Artamus superciliosus* R, S, B; H 1, 4.

JH remembered this species breeding in the 1930s. There was an influx to the Island in 1982, and CC saw 70+ at Gartsides grassland on 2 November 1982. There are a few other records.

Dusky Woodswallow *Artamus cyanopterus* C, S, B; H 1–5.

Grey Butcherbird *Cracticus torquatus* C, B; H 1, 4, 5.

Australian Magpie *Cracticus tibicen* A, B; H 1, 4, 5.

Pied Currawong *Strepera graculina* R; H 1, 4.

There are records from the south in 2000 and 2008, and from FOI surveys in the centre on 18 April 2009 and at Albions on 12 December 2009. One was observed on the Island on 19 September 2015 (VBA data).

Grey Currawong *Strepera versicolor* C, B; H 1, 3–6.

Rufous Fantail *Rhipidura rufifrons* R, S; H 1.

Recorded occasionally, most recently at Albions forest on 12 January 2013.

Grey Fantail *Rhipidura albiscapa* A, B; H 1–5.

Willie Wagtail *Rhipidura leucophrys* C, B; H 1, 3–5.

Australian Raven *Corvus coronoides* C, B; H 1–6.

Little Raven *Corvus mellori* C, B; H 1, 4, 5.

Both species of raven appear in some of DQ's earliest records in the 1960s, the Australian Raven being more common.

Satin Flycatcher *Myiagra cyanoleuca* C, S, B; H 1.

Restless Flycatcher *Myiagra inquieta* V.

There are only two French Island records: one seen by DQ adjacent to Tortoise Head saltmarsh on 27 April 1968 and one observed by WESBOC at an unidentified site on 14 December 1996 (S. Maddigan pers. comm.).

Emison *et al.* (1987, p. 192) noted that "In south-eastern Victoria they are restricted to grassy dry forests and woodlands along rivers".

There are few records in the general Western Port region (VBA data).

Magpie-lark *Grallina cyanoleuca* C, B; H 1, 3–6.

White-winged Chough *Corcorax melanorhamphos* Ex, B; H 1, 4.

JH remembered this species breeding on the Island in the late 1930s. DQ observed some old nests in trees in the south-west in 1965 and 1968.

This species is now found mostly north of the Great Divide (Emison *et al.* 1987; VBA data). There is only one Western Port/West Gippsland record (VBA data), from the Wonthaggi area in December 1998. This species is now believed to be extinct on the Mornington Peninsula (Schedvin 2016), although there are records from the forested foothills of the Western Port catchment (Andrew *et al.* 1984).

Jacky Winter *Microeca fascians* R; H 1, 4.

DQ saw one at The Knoll in winter 1964 and one in the south-west of the Island on 16 January 1973. MS observed one near Tankerton in September 1974, and MO observed one north of Mt Wellington in April 1995.

In the greater Western Port catchment, the Jacky Winter was historically considered to be a “moderately common and widespread breeding resident, except in extensively cleared farmland and thick forests” (Andrew *et al.* 1984, p. 372). However, nearby mainland records suggest that it was rare and probably never common on the Mornington Peninsula (Brook 1953; Davis & Reid 1975b; Wakefield 2006), where it has also declined, with only seven reliable reports since 2004 (Burke 2012; Cousland & Blyth 2012; Thomas 2012; Caldecott 2016; M. Burrows pers. comm.).

The Jacky Winter has been reported only rarely from Phillip Island, where Wheeler (1981) considered it “rather rare”. The most recent record there was on 21 February 2012, near Cape Woolamai (VBA data). The population is thought to be declining because of agricultural and urban development (BirdLife International 2016).

Scarlet Robin *Petroica boodang* C, B; H 1–6.

Flame Robin *Petroica phoenicea* C, W; H 1–6.

Rose Robin *Petroica rosea* R, S, B; H 1.

Recorded in January 1978. Two adults feeding a juvenile were seen by MO & GL in forest at Red Bluff on 11 October 2008.

Pink Robin *Petroica rodinogaster* U, W; H 1, 3, 4.

DQ has records from Heifer Swamp (1967, 1968 and 1969), southern coast forest (15 June 1974) and The Anchorage (23 May 1982). Single birds have been seen by CC at Mt Wellington (26 May 1984), BM near Freeman Point (female in pines, 18 June 1988), and AB at Heifer Swamp (12 March 2016).

Hooded Robin *Melanodryas cucullata* Ex, NT; H 1, 4.

A pair was seen by PR at The Knoll (near Chilcott Rocks) in winter 1964. A single female was seen by DQ at that site on 23 occasions from 1965 to 1968 (Quinn 1967a). This species is now presumed to be extinct on the Island.

In his notebooks DQ recorded:

All my records are of obviously the same female, which appeared to have died of old age. It looks like it failed to find a mate, or a new one, due to the rarity of the species on the island. The spread of my records tell us that it is or was a resident and not a vagrant.

At some stage, the understorey of the forests on French Island became dense and heathy—partly a consequence of frequent burning of the Island's heaths and forests before the Park was established. This reduced the Robin's preferred habitat. The understorey began to open out again in the mid 1990s (Lacey 2008). The Robin's occurrence is positively associated with patch size, and with components of habitat complexity that include the amount of tree-canopy cover, shrub-cover, ground-cover, logs, fallen branches and litter (NSW Scientific Committee 2008).

Feral Cats *Felis catus* were probably another factor in the extinction on the Island of the Hooded Robin, which is particularly vulnerable to predation by introduced species (Fitri & Ford 1997).

Eastern Yellow Robin *Eopsaltria australis* C, B; H 1, 4, 5.

Horsfield's Bushlark *Mirafra javanica* R, S, B; H 3, 4.

There were nine records throughout the Island by DQ and others from 1965 to 1982, all on the western side apart from one at Gartsides and one at Peck Point.

***Eurasian Skylark** *Alauda arvensis* C, B; H 4, 5.

This species was first introduced to Western Port by the Acclimatisation Society of Victoria in 1866 (Jenkins 1977). There are many records from the Island by DQ and in the VBA data.

Golden-headed Cisticola *Cisticola exilis* C, B; H 3–6.

Australian Reed-Warbler *Acrocephalus australis* U, S, B; H 3.

This species was recorded in 1984–1988 from the western side of Island, with most records from Linley's and Heifer Swamps. The most recent record was on 10 December 2011 (FOFI survey).

Little Grassbird *Megalurus gramineus* C, B; H 3, 6.

Rufous Songlark *Cincloramphus mathewsi* R, S; H 4.

There are at least two records from the south-west in the 1970s–1980s, and one record in the north-east on 7 December 1991 (VBA data).

Brown Songlark *Cincloramphus cruralis* R, S; H 4.

There were some records in the southern part of the Island in the 1970s–1980s.

Emison *et al.* (1987, p. 220) noted that “the species is a summer migrant to Victoria from inland Australia. They are irregular and somewhat irruptive in southern Victoria”.

Silvereye *Zosterops lateralis* C, B; H 1, 2, 4, 5.

Welcome Swallow *Hirundo neoxena* A, B; H 3–6.

Fairy Martin *Petrochelidon ariel* U, S; H 3–6.

Tree Martin *Petrochelidon nigricans* C, S, B; H 3–6.

Bassian Thrush *Zoothera lunulata* U, B; H 1, 3, 5.

***Common Blackbird** *Turdus merula* C, B; H 1, 4, 5.

Originally introduced to Western Port by the Acclimatisation Society of Victoria in 1860 (Jenkins 1977) but now common.

***Common Starling** *Sturnus vulgaris* A, B; H 1–6.

Originally introduced to Western Port by the Acclimatisation Society of Victoria in 1860 (Jenkins 1977) but now very common.

***Common Myna** *Sturnus tristis* U, B; H 4.

Initially introduced to the Western Port area by 1868 (Le Souef 1963), with the first formal record on French Island by DQ in 1973.

Mistletoebird *Dicaeum hirundinaceum* C, B; H 1, 4.

Red-browed Finch *Neochmia temporalis* U, B; H 1, 4.

***House Sparrow** *Passer domesticus* C, B; H 4.

Introduced to Victoria by 1863 (Wheeler 1967; Balmford 1978).

***Eurasian Tree Sparrow** *Passer montanus* V.

CC saw one at Blue Gum Point on 6 August 1981. VBA data has a single record dated May 1980 at Freeman Point.

This species was introduced to Victoria by 1863 (Wheeler 1967), but it is rare in the Western Port district (VBA data), viz. on Phillip Island. Wheeler (1981, p. 22) described it as “rare” and noted “the first record for the Western Port district was on the tennis courts at Cowes in November 1975”.

Australasian Pipit *Anthus novaeseelandiae* C, B; H 3–6.

***European Goldfinch** *Carduelis carduelis* C, B; H 1, 3–6.

Cooper (1975) noted that the species was “an introduction to Victoria from Europe about 1843, and now well established on Wilson’s Promontory”. Flocks of up to 100 have been recorded from the nearby Mornington Peninsula (Davis & Reid 1975b).

***Common Greenfinch** *Chloris chloris* U, B; H 1, 3–6.

This species was introduced into Victoria by 1863 (Wheeler 1967). Flocks of up to 300 have been recorded from the Mornington Peninsula (Davis & Reid 1975b).

Discussion

Significance of French Island in maintaining regional bird populations

Andrew *et al.* (1984, p. 177) argued that “French Island’s isolation is one of its most valuable attributes to the fauna of the region”. The Island has extensive areas of several habitats in good condition. Its separation from the mainland by marine waters and the establishment of the French Island National Park have been key factors in this. It is regionally significant in terms of the amount of habitat remaining, especially given the loss and fragmentation of similar habitats on the nearby mainland, and might play a vital role in maintaining the population levels of several bird species in the region.

There are substantial areas of Lowland Forest on French Island (especially on the central ridge including

Mt Wellington) and Herb-rich Foothill Forest on part of the southern coast. Such forests are the preferred habitat for many species (e.g. Varied Sittella, Golden Whistler and Satin Flycatcher).

There are some comparable areas of Lowland Forest on the adjacent mainland, in particular around Red Hill and Devilbend Natural Features Reserve on the Mornington Peninsula (Figure 1), and, on the eastern side of Western Port, similar forest occurs in and adjacent to The Gurdies and Grantville Nature Conservation Reserves. These sites support a similar range of bird species to the French Island forests, and some species might move between the different forest sites.

French Island contains extensive areas of Sand Heathland, Wet Heathland and Heathy Woodland, especially in the western and north-western parts. On the mainland, most of these habitats have been cleared. However, substantial remnants of Heathy Woodland occur north and west of Western Port at the Royal Botanic Gardens (Cranbourne) and Langwarrin Flora and Fauna Reserve, and there are small remnants near Tooradin, Warneet and Tyabb. On the eastern side of the Bay, substantial remnants occur to the north of The Gurdies.

These heathy ecosystems provide habitat for many bird species, especially for most of the honeyeaters. Given the relative abundance of the heathlands here, French Island might have a vital role in maintaining the overall regional population of these species. For example, the Tawny-crowned Honeyeater is much more frequently reported on French Island than on the adjacent mainland.

Low, wet heath is a preferred habitat of the rare King Quail. As French Island is thought to be the stronghold of the King Quail in Victoria (O’Brien 2006), it is probable that there is movement of this species between the Island and similar sites on the mainland.

Coastal Saltmarsh is abundant on French Island and is prime habitat for the Orange-bellied Parrot, although the available habitat has not prevented the decline of this species. This is also habitat for the Blue-winged Parrot, which is regularly observed on French Island but rare on Phillip Island (which has little Coastal Saltmarsh), where it occurs only on the southern coast (Wheeler 1981).

Species that have declined

Some species have become extinct on French Island. In the Bush Stone-Curlew and White-winged Chough, extinction occurred well before DQ commenced his surveys in 1963. These extinctions, and also that of the Hooded Robin (which survived until 1968), were part of a more widespread contraction of these species in Victoria.

The Bush Stone-curlew is now considered extinct in southern central Victoria (Emison *et al.* 1987; Marchant & Higgins 1993). Apart from Wheelwright’s observations in the 1860s (Wheelwright 1862), the 1908–1910 records at Wilsons Promontory (Cooper 1975), and a vagrant in August 2009 (a single bird on the Southern Golf Course, Dingley: A. Silcocks pers. comm.), there are no other West Gippsland or Western Port records for this species.

The Hooded Robin was reported in the Western Port area in the early 1900s (Davis & Reid 1974). It has now declined or disappeared from many habitats in southern

Victoria, e.g. the Dandenong Ranges (Wheeler 1972). It was noted in November 1963 by Davis & Reid (1975b, p. 166) as an unusual species for the area around Somers and Hastings: "The occurrence of this species so far south and near the coast is interesting. It occurred for a short time only and apparently bred in the district." These authors also noted a male at the HMAS Cerberus Naval Base on 25 November 1963, and later two males, one female and one flying young on 9 February 1964. More recently, it was considered an 'endangered species' on the Mornington Peninsula (Sault 2003) and now possibly extinct there (Wakefield 2006; Cousland & Blyth 2012). It appears to have been absent always from Phillip Island (Wheeler 1981).

Some species have declined in numbers on French Island. The Orange-bellied Parrot has not been recorded there since 2006—part of a general decline of that species. Observations of the Blue-winged Parrot on French Island and throughout the region have greatly declined since 2003 (VBA data).

The Tawny-crowned Honeyeater has declined on French Island since the 1990s, possibly because, with less frequent fires, its heathland habitat has been developing into heathy woodland. The Island appears to be an outlier population for this honeyeater, with only a few old records from the nearby mainland. This could be explained by the current distribution of its preferred habitat. Emison *et al.* (1987, p. 233) noted that "the Victorian strongholds of the Tawny-crowned Honeyeater are the... sparsely wooded coastal heaths of East Gippsland, Wilsons Promontory, French Island and the Otway Ranges". Andrew *et al.* (1984, p. 388) noted that this species was "restricted to the heaths of French Island and the adjacent western coast of the bay" but has not been recorded from Phillip Island (Wheeler 1981; VBA data), where there is no suitable habitat.

Species that have increased

Some species appear to be increasing slightly in abundance, for example the Little Eagle, Black Falcon and Pied Currawong. The Eastern Barn Owl might also be increasing, but it is more likely that it is observed and recorded more often by the rangers and thus documented more often now.

Some species are starting to appear (or re-appear) now. For example, the Little Corella has undergone a steady expansion in range and numbers into southern Victoria since 1950 (Emison *et al.* 1987). It is a recent arrival to both the Mornington Peninsula (where there are now numerous records: Wakefield 2006; VBA data) and French Island. A recent Peninsula record was a flock of 300+ flying towards a roost-site at Hastings on 31 July 2016 (Chandler 2016a).

The Grey Goshawk has re-appeared recently. French Island is within its historical range, so this does not indicate any general expansion. Further intermittent observations can be expected. Species appearing in small numbers (and previously rare or absent) include the Rainbow Lorikeet (in tune with its expansion in southern Victoria) and Australian King-Parrot.

Short-term species

Some species have been recorded over periods of just a few years, after which they have vanished, in some cases

to return later. Examples are: Horsfield's Bushlark (1965–1982), White-winged Triller (1968–1969, 1982–1983), Spotted Harrier (1968–1971, 1983), Swift Parrot (1968–1987), Brown Songlark (1970s–1980s), Rufous Songlark (1970s–1991), Sulphur-crested Cockatoo (1981–1986), Collared Sparrowhawk (1983–1988, 2004–2011), and Singing Honeyeater (1984–1990).

Emison *et al.* (1987, p. 179) noted that the numbers of White-winged Trillers "coming into Victoria vary from year to year. In years when larger numbers of Trillers appear, their range may extend into south-eastern Victoria". Davis & Reid (1975b) noted a large influx on the Mornington Peninsula in 1963. Higgins *et al.* (2006, p. 329) noted that this species' appearance in an area can be sporadic and irregular and that "such fluctuations [are] often attributed to varying climatic or habitat conditions, especially availability of water, rainfall or drought".

Other species have turned up sporadically on French Island, for example the Gang-gang Cockatoo (1940, 1993), Musk Lorikeet (most recently in 2012) and Olive-backed Oriole (most recently in 2015).

There was a single French Island record of the Letter-winged Kite at Rams Island in 1977. Hollands (1979, p. 2) noted that the sightings of this species tended to be single records for most locations and that most of the Victorian sightings were from habitat that was "open, flat and windswept, very close to the sea with isolated groups of small trees". This fits the habitat on Rams Island.

Some species rare on French Island are common on the mainland around Western Port and/or on Phillip Island. The Superb Fairy-wren and Striated Fieldwren are examples. Their rarity on French Island is surprising, given the abundance of suitable habitat. It is possible that these two species never managed to form viable populations on the Island. The fact that most of the Superb Fairy-wren records are from on or near the south-western coast suggests that the birds were blown over in storms. This might apply also to the Crested Shrike-tit, for which there is only a single record on French Island but several on Phillip Island and the Mornington Peninsula (Davis & Reid 1975b).

Migratory movements

There are several seasonal migrants, including the Swamp Harrier, cuckoos, Rufous Whistler, Dusky Woodswallow and Satin Flycatcher (spring/summer migrants) and the Flame Robin and Pink Robin (autumn/winter migrants). Several species are largely resident on the Island though some of the individual birds migrate seasonally, as studied by Clarke *et al.* (1999) for various species throughout Australia.

In the case of the Grey Fantail, Clarke *et al.* (1999) found that the greater part of the population in eastern Australia appears to winter in northern New South Wales and Queensland but then largely abandons these regions to breed farther south. However, many Grey Fantails remain in Victoria and Tasmania throughout the year. On two autumn surveys of Gartside's forest in the north-east of French Island (14 March 2009 and 13 March 2010), FOI members counted 26 Fantails, well above the usual number (up to 16 counted at that site), suggesting that a northward migration of Grey Fantails from Tasmania might have been in process.

The data from Clarke *et al.* (1999) suggest a similar pattern for the Silvereye: FOI surveys recorded unusually high numbers of Silvereyes—34 at Gartsides in March 2010 and 50 in Albions forest (on the far eastern coast) in January 2015.

Conservation issues

Given the general decline of several bird species in Victoria, it is important to preserve all of the intact habitat that remains, much of which is on private land. Furthermore, some of the land abutting French Island National Park has very high conservation values (e.g. near Point Leschenault).

Weed control is important. Of special concern is Sweet Pittosporum *Pittosporum undulatum*, the spread of which is formally recognised as a threatening process in Victoria (SAC 1994). This plant is becoming increasingly dominant in the understorey of the southern coast forest and is spreading to some other forest sites; if unchecked, this is likely to lead to major changes to the ecosystem. This is supported by the studies of Gleadow & Ashton (1981) and Mullet & Simmons (1995), who documented this plant's spread near Melbourne and highlighted the serious threat to Victorian vegetation communities. Gleadow (1982) reported that the Common Blackbird, a common bird on French Island, is the principal dispersal agent of Sweet Pittosporum in the greater Melbourne area.

There has been extensive clearing on much of the land north of Western Port, mainly for residential and industrial development as Melbourne expands. Old ecological corridors are being eliminated, especially in the Cranbourne area, including the neighbourhood of the Botanic Gardens. It is important that high-quality patches of native vegetation in the immediate coastal area of the mainland be reserved and that substantial corridors be retained, or revegetated, to enable movement of species.

It is important that surveys of the avifauna of French Island continue. As most of the bird data for French Island have been added to the VBA, new data should continue to be added to the database. Continued monitoring of the habitats as they change over time is also vital. In this paper, we have attempted to carefully document the terrestrial birds of French Island, with the aim of generating a benchmark for future comparative assessments of the Island's birds. As the Island's habitats continue to consolidate or change in the future, such studies would have an important role in developing good conservation management decisions.

Acknowledgments

Parks Victoria rangers on French Island have provided several bird records, have helped monitor species in general and have provided FOI members with transport to sites on many occasions. In particular, we wish to thank Scott Coutts, Dave Stephenson and Aaron Ledden. Several members of FOI have participated in surveys and contributed observations. The contribution of Chris Chandler, in widely circulating the results of his many observations, has been outstanding. Bett Mitchell and Ken Harris have been important contributors. Walter Mitchell has provided many fine photographs. Charlie Silveira, consultant biologist (Melbourne), contributed some of his own survey data when visiting the Island in the 1980s. Sophie Maddigan, Secretary, BirdLife Western Port, arranged for access to the *Mornington*

Peninsula Birdlife members' observations for the Island and published requests to those members for unpublished French Island bird records. Max Burrows, BirdLife Mornington Peninsula, provided access to members' records. We thank the Australian Bird and Bat Banding Scheme (ABBBS) for making banding data available, along with the individual bird-banders who supplied the data to the ABBBS. We thank Peter Black (Department of Environment, Land, Water and Planning, Melbourne), who generated aerial and satellite imagery for the Western Port region that enabled vegetation patterns to be examined. We are grateful to Kuniko Yamada for creating the map of Western Port (Figure 1) and to John Waddingham for creating the map of French Island (Figure 2). Thanks go to Birgita Hansen and Alan Webster, whose valuable comments on a draft of this paper led to significant improvements, and to Grant Palmer, James Fitzsimons and Julia Hurley for editing assistance.

References

- Andrew, D.L., Lumsden, L.F. & Dixon, J.M. (1984). *Sites of Zoological Significance in the Westernport Region*. National Museum of Victoria, Environmental Studies Division, Ministry for Conservation, Victoria, Melbourne.
- Balmford, R. (1978). Early introductions of birds to Victoria. *Australian Bird Watcher* **7**, 237–248.
- Belcher, C. & Hastings, I. (1983). *Management Prescriptions for Wildlife in French Island State Park*. Technical Report Series No. 3. Resources and Planning Branch, Fisheries & Wildlife Service. Department of Conservation, Forests & Lands, Victoria.
- BirdLife International (2016). Species factsheet: *Microeca fascians*. BirdLife International IUCN Red List for birds. Available online: <http://www.birdlife.org> (retrieved 26 July 2016).
- Blandowski, W. (1857). Report No. III, to the Surveyor-General, of an excursion from King's Station to Bass River, Phillip and French Islands. *Transactions of the Philosophical Institute of Victoria* **1**, 50–67.
- Bird Observers Club of Australia (2003). *Wings over Western Port: Three Decades Surveying Wetland Birds 1973-2003*. BOCA, Melbourne.
- Brook, P. (1953). Birds of Crib Point – Somers area. *Bird Observer* **October 1953**.
- Burke, J. (2012). Interesting sightings (Jacky Winter). *Mornington Peninsula Birdlife* **1** (2), 12.
- Caldecott, K. (2016). Interesting sightings (Jacky Winter). *Mornington Peninsula Birdlife* **5** (2), 15.
- Carter, M. (1989). The kings of French Island. *Bird Observer* **690**, 95.
- Chandler, C. (2002). Rare and Threatened Vegetation on French Island. Unpublished report.
- Chandler, C. (2016a). Interesting sightings (Little Corella). *Mornington Peninsula Birdlife* **5** (3), 13.
- Chandler, C. (2016b). French Island bird observations. *Mornington Peninsula Birdlife* **5** (3), 17.
- Chandler, C. (2016c). Interesting sightings (Blue-winged Parrot). *Mornington Peninsula Birdlife* **5** (2), 15.
- Chandler, C. (2016d). Interesting sightings (Blue-winged Parrot). *Mornington Peninsula Birdlife* **5** (3), 17.
- Christidis, L. & Boles, W.E. (2008). *Systematics and Taxonomy of Australian Birds*. CSIRO Publishing, Melbourne.
- Clarke, M.F., Griffioen, P. & Loyn, R.H. (1999). Where do all the bush birds go? *Wingspan* **9** (supplement), 1–16.
- Conlan, K. (2016). Interesting sightings (White-throated Nightjar). *Mornington Peninsula Birdlife* **5** (2), 15.
- Cooper, R.P. (1975). The avifauna of Wilson's Promontory. Part 4, A. Non-passerines. *Australian Bird Watcher* **6**, 17–34.
- Cousland, S. & Blyth, J. (2012). Changes in bird populations around Melbourne and the Mornington Peninsula. *Mornington Peninsula Birdlife* **1** (1), 10.

- Cunningham, C.X., Thomas, A.A., Masters, P. & Cassey, P. (2016). Home range, habitat suitability and population modelling of feral Indian peafowl (*Pavo cristatus*) on Kangaroo Island, South Australia. *Australian Journal of Zoology* **64**, 107–116.
- Davis, W.A. & Reid, A.J. (1974). Victorian Ornithological Research Group Westernport Report No. 1, Part 1. The birds of Somers, Sandy Point, Hastings districts, Westernport Bay, Victoria, Australia. *Victorian Naturalist* **91**, 212–222.
- Davis, W.A. & Reid, A.J. (1975a). Victorian Ornithological Research Group Westernport Report No. 1, Part 3. The birds of Somers, Sandy Point, Hastings districts, Westernport Bay, Victoria, Australia. *Victorian Naturalist* **92**, 60–70.
- Davis, W.A. & Reid, A.J. (1975b). Victorian Ornithological Research Group Westernport Report No. 1, Part 4. The birds of Somers, Sandy Point, Hastings districts, Westernport Bay, Victoria, Australia. *Victorian Naturalist* **92**, 163–171.
- Department of Environment, Land, Water and Planning (2016). *National Recovery Plan for the Orange-bellied Parrot Neophema chrysogaster*. Australian Government, Canberra.
- DSE (2013). *Advisory List of Threatened Vertebrate Fauna in Victoria 2013*. Department of Sustainability & Environment, Melbourne. Available online: <http://www.depi.vic.gov.au/> (retrieved May 2016).
- Emison, W.B., Beardsell, C.M., Norman, F.I., Loyn, R.H. & Bennett, S.C. (1987). *Atlas of Victorian Birds*. Department of Conservation, Forests & Lands and Royal Australasian Ornithologists Union, Melbourne.
- Fitri, L. & Ford, H.A. (1997). Status, habitat and social organisation of the Hooded Robin *Melanodryas cucullata* in the New England region of New South Wales. *Australian Bird Watcher* **17**, 142–155.
- Fitzsimons, J.A. & Ashe, C. (2003) Some recent strategic additions to Victoria's protected area system 1997–2002. *Victorian Naturalist* **120**, 98–108.
- Fitzsimons, J.A., FitzSimons, P. & Ashe, C. (2004). Further strategic additions to Victoria's public protected area system: 2002–2004. *Victorian Naturalist* **121**, 214–225.
- Fitzsimons, J.A., Williams, C. & FitzSimons, P. (2006). Ecological attributes of strategic land acquisitions for addition to Victoria's public protected area estate: 2004–2005. *Victorian Naturalist* **123**, 134–145.
- Fitzsimons, J.A., Williams, C., Walsh, V., FitzSimons, P. & U'Ren, G. (2008). Ecological attributes of strategic land acquisitions for addition to Victoria's public protected area estate (2006–2007). *Victorian Naturalist* **125**, 140–149.
- Gleadow, R.M. (1982). Invasion by *Pittosporum undulatum* of the forests of central Victoria. II. Dispersal, germination and establishment. *Australian Journal of Botany* **30**, 185–198.
- Gleadow, R. & Ashton, D.H. (1981). Invasion by *Pittosporum undulatum* of the forests of central Victoria. I. Invasion patterns and plant morphology. *Australian Journal of Botany* **29**, 705–720.
- Hansen, B., Menkhorst, P. & Loyn, R. (2011). *Western Port Welcomes Waterbirds: Waterbird Usage of Western Port*. Arthur Rylah Institute for Environmental Research, Department of Sustainability & Environment, Melbourne.
- Higgins, P.J., Peter, J.M. & Cowling, S.J. (2006). *Handbook of Australian, New Zealand & Antarctic Birds, Volume 7: Boatbill to Starlings, Part A: Boatbill to Larks*. Oxford University Press, Melbourne.
- Hollands, D. (1984). *Eagles, Hawks and Falcons of Australia*. Nelson, Melbourne.
- Hollands, D.L.G. (1979). The Letter-winged Kite irruption of 1976–77. *Australian Bird Watcher* **8**, 1–18.
- Hyett, J. & Gottsch, M.D. (1963). The birds of Quail Island, Victoria. *Australian Bird Watcher* **2**, 51–55.
- Jenkins, C.F.H. (1977). *The Noah's Ark Syndrome: One Hundred Years of Acclimatisation and Zoo Development in Australia*. Zoological Gardens Board of Western Australia, General Printing, West Australian Newspapers Limited, Perth.
- Johnston, M. (2008). *Introduced Animals on Victorian Islands: Improving Australia's Ability to Protect its Island Habitats from Feral Animals*. Arthur Rylah Institute for Environmental Research Client Report. Department of Sustainability & Environment, Melbourne.
- Kirkwood, J. & O'Connor, J. (2010). The state of Australia's birds: Islands and birds. *Wingspan* **20** (4) (Supplement).
- Kuiter, A. (2016). Interesting sightings (Grey Goshawk). *Mornington Peninsula Birdlife* **5** (1), 14.
- Lacey, G. (2008). *Reading the Land*. Australian Scholarly Publishing, Melbourne.
- Le Soeuf, J.C. (1963). Acclimatization in Victoria. *Victorian Historical Magazine* **36** (1), 8–29.
- Loyn, R.H., Dann, P. & Bingham, P. (1994). Ten years of waterbird counts in Western Port, Victoria, 1973–83. I. Waterfowl and large wading birds. *Australian Bird Watcher* **15**, 333–350.
- Marchant, S. & Higgins, P.J. (Eds) (1993). *Handbook of Australian, New Zealand & Antarctic Birds, Volume 2: Raptors to Lapwings*. Oxford University Press, Melbourne.
- Mitchell, B. (2012). Little Button Quail at my window. *Mornington Peninsula BirdLife* **1** (2), 15.
- Mitchell, P. & Mitchell, H. (1975). The birds of Mornington Peninsula, Phillip Island, French Island and Mud Island. *Peninsula Naturalist* **10**, 4–9.
- Mullet, T. & Simmons, D. (1995). Ecological impacts of the environmental weed sweet pittosporum (*Pittosporum undulatum* Vent.) in dry sclerophyll forest communities, Victoria. *Plant Protection Quarterly* **10** (4), 131–138.
- NSW Scientific Committee (2008). *Hooded Robin Melanodryas cucullata cucullata Populations in Eastern Bioregions. Review of Current Information in NSW*. NSW Scientific Committee, Sydney. Available online: www.environment.nsw.gov.au/resources/nature/schedules/HoodedRobinPop.pdf (retrieved 26 July 2016).
- Oates, A. & Taranto, M. (2001). *Vegetation Mapping of the Port Phillip and Westernport Region*. Arthur Rylah Institute for Environmental Research, Department of Natural Resources & Environment, Melbourne.
- O'Brien, M. (2006). Distribution, habitat and status of the King Quail *Coturnix chinensis victoriae* in Victoria: The importance of French Island, Western Port Bay. *Australian Field Ornithology* **23**, 62–76.
- O'Brien, M. & Lacey, G. (2016). White-bellied Sea-Eagle breeding in the Western Port area, Victoria. *Australian Field Ornithology* **33**, 46–56.
- Opie, A.M., Gullan, P.K., van Berkel, S.C. & van Rees, H. (1984). Sites of Botanical Significance in the Western Port Region. Environmental Studies Series No. 328. Department of Conservation, Forest & Lands, Victoria.
- Parks Victoria (1998). *French Island National Park Management Plan*. Parks Victoria, Melbourne.
- Phillip Island Nature Parks (2012). *Environment Plan 2012–2017*. Phillip Island Nature Parks, Cowes, Phillip Island, Vic.
- Quinn, D.J. (1967a). Excursion to French Island. *Bird Observer* **426**, 3–4.
- Quinn, D.J. (1967b). Orange-breasted Parrots on French Island. *Australian Bird Watcher* **3**, 32–33.
- Quinn, D.J. (1968). Survey of French Island. *Bird Observer* **July 1968**, 3–4.
- Quinn, D.J. (1969a). The call of the White-throated Nightjar. *Australian Bird Watcher* **3**, 210.
- Quinn, D.J. (1969b). The White-breasted Sea-Eagle in Western Port, Vic. *Australian Bird Watcher* **3**, 162–165.
- Quinn, D.J. (1971). The case for French Island as a natural haven. *Bird Observer* **November 1971**, 7–8.
- Quinn, D.J. & Wade, D. (1970). A French Island record of the Little Quail. *Australian Bird Watcher* **3**, 279–280.
- Quinn, D. & Lacey, G. (1999). *Birds of French Island Wetlands*. Spectrum Publications, Melbourne.
- Ryan, C.S. (1906). President's address: On European and other birds liberated in Victoria. *Emu* **5**, 110–119.

- SAC (1994). Final Recommendation on a nomination for listing: 'Spread of Sweet Pittosporum *Pittosporum undulatum* in areas outside its natural range' (Nomination No. 283) (Potentially Threatening Process). Flora and Fauna Guarantee Act Scientific Advisory Committee. Department of Conservation & Natural Resources, Melbourne.
- Sault, T.H. (2003). *The Mornington Peninsula Through the Eye of a Naturalist*. Trust for Nature and Southern Peninsula Tree Preservation Society, Victoria.
- Schedvin, B. (2016). Habitat for food and shelter: Birds & biolinks. *Mornington Peninsula Birdlife* 5 (3), 12.
- Seddon, G. (1975). *Phillip Island: Capability, Conflict and Compromise*. Publication No. 4. Report to Western Port Regional Planning Authority. Centre for Environmental Studies, University of Melbourne, Melbourne.
- Stewart, F. (2005). *Bayside Birds: The Inland*. Bayside City Council. Caincolour Printing, Melbourne.
- Thomas, M. (2012). Interesting sightings (Jacky Winter). *Mornington Peninsula Birdlife* 1 (2), 12.
- Vanderzee, M.P. (1995). *A Vegetation Assessment of French Island State Park*. Report to National Parks Service, Department of Conservation & Natural Resources, Melbourne.
- VBA (2017). Victorian Biodiversity Atlas (2017). State of Victoria, Department of Environment, Land, Water & Planning (published 1 July 2016).
- Wakefield, L. (Ed.) (2006). *Where to Find Birds Around Frankston and the Mornington Peninsula*. BOCA Report No. 15. Bird Observers Club of Australia, Mornington Peninsula Branch.
- Wheeler, W.R. (1967). *A Handlist of the Birds of Victoria*. Victorian Ornithological Research Group. Melbourne University Press, Melbourne.
- Wheeler, W.R. (1972). *Birds of the Dandenongs: An Occurrence Record*. Field Naturalists Club of Victoria. Jenkins Buxton & Company Proprietary Limited, Melbourne.
- Wheeler, W.R. (1981). *The Birds of Phillip Island*. Western Port Bird Observers Club and Gould League of Victoria, Melbourne.
- Wheelwright, H.W. (1862). *Bush Wanderings of a Naturalist*. Routledge, Warne & Routledge, London.

Received 21 December 2016, accepted 19 February 2018,
published online 7 June 2018

