TASMANIAN RECORDS OF VAGRANT PENGUINS, 1991–2025

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ABSTRACT

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During the period 01 January 1991 to 31 August 2025, there were 274 records of vagrant penguins in Tasmania. These records represented three genera: *Aptenodytes*, *Pygoscelis*, and *Eudyptes*. The most frequently reported species were Fiordland Penguin *E. pachyrhynchus*, Royal Penguin *E. schlegeli*, and King Penguin *A. patagonicus*. High numbers of records were reported from 10 years, with a peak in 1999 and a lower peak in 2023. Records from January to March accounted for approximately 42% of all vagrant penguin occurrences and corresponded with the arrival of pre-moult birds of all ages. A range of species-specific oceanographic and environmental factors contributed to the arrival of these vagrant penguins. Individuals typically arrived underweight and often presented with injuries, making them vulnerable to dog attacks. Providing care for vagrant penguins would enhance conservation efforts and incorporate animal welfare concerns into best-practice responses.

Key words: penguins, dispersion, vagrancy, Tasmania, *Aptenodytes*, *Pygoscelis*, *Eudyptes*

INTRODUCTION

Contemporary investigations into the oceanic distributions of fledgling and post-breeding adult penguins are providing novel insights into the extents of these behaviours throughout the Southern Hemisphere (Ainley & Wilson, 2023; Melina et al., 2025). Historically, dispersion and migration of penguins and other birds were typically inferred from recovery and resighting of banded individuals (Brooke, 2018). In recent decades, satellite-linked tracking devices have been used to locate the individual birds; however, because they are more expensive than bands, they have been deployed on many fewer birds.

Indirect evidence for the dispersion of fledgling and post-breeding adult penguins has been provided by observations away from their natal colonies, including at-sea records (Reid et al., 1999) and records of vagrants ashore—typically beach-washed individuals, and less frequently live birds (e.g., Petersen et al., 2015; Shepherd et al., 2021). In the Australasian region, tracking studies on crested penguins *Eudyptes* spp. (e.g., Mattern et al., 2018, 2025; Poupart et al., 2019; Thiebot et al., 2020) document the dispersion of breeding penguins from New Zealand's mainland. Early studies on Macquarie Island (Hull, 1999; Wienecke & Robertson, 2002) provided initial data on breeding season foraging trips and remain the only studies on penguins undertaken there.

Tabulation of 146 records of vagrant penguins to Tasmania (Woehler, 1992a) comprised reports from three genera from nine species. Since then, novel records and re-evaluations of some previous crested penguin records (Simpson 2008a, 2009, 2011) and numerous observations have been reported around Tasmania. The aim of the present study is to update the 1992 inventory for Tasmania with records of penguins in Tasmania for the 35-year period from 1991 to 2025, inclusive. In conjunction with the previous inventory to 1990, this compilation seeks to identify indicative spatial and/or temporal patterns in records, species-specific patterns and trends, and to provide an initial, holistic synthesis of the minimum numbers of penguins recorded in Tasmania, as allowed by the available data.

METHODS AND DATA SOURCES

The 1992 inventory and analyses generated increased interest in, and awareness of, vagrant penguins to Tasmania. This, in turn, led to an increase in reports, coinciding with the development and rapid evolution of social media and the enhanced capacity for real-time photographic documentation of field observations. For this compilation, details of observations were harvested as they were reported from social media posts, local and regional newspapers, community newsletters and magazines, and were often supplemented by follow-up discussions with the observers. In some cases, detailed descriptions and additional notes were obtained; however, the majority of reports typically comprised date, location, guessed species identification, and the status of the bird (alive, dead, moulting etc). Some beach-washed carcasses could be identified only to genus, at best, due to missing body parts and/or advanced decomposition.

Other data sources for this compilation were varied and extensive. Veterinarians, wildlife clinic staff, and associated wildlife carers contributed records, as did Tasmania Parks and Wildlife Service rangers and field staff, and staff from DPIPWE (Department of Primary Industries, Parks, Water and the Environment; now Natural Resources and Environment, NRE). Staff at the Tasmanian Museum and Art Gallery (TMAG) provided details of past and current specimens. Commercial tour operators' staff and guests submitted reports and photographs, typically within 24 h of carcasses being found. Reports published in the (now defunct) *Annual Systematic Lists* in the *Tasmanian Bird Report* were extracted for the period 1991 to 2005. Records from BirdLife Australia's Birdata database (https://birdata.birdlife.org.au/), the BirdLife Australia Rarities Committee case records (https://birdata.birdlife.org.au/birdlife-australia-rarities-committee), and the Tasmanian Natural Values Atlas (https://www.naturalvaluesatlas.tas.gov.au/) were collated. Records in eBird (https://ebird.org/region/

AU-TAS/activity?yr=all&m=) and iNaturalist (https://www.inaturalist.org/places/tasmania) were substantially fewer and replicated other data sources, typically with fewer details.

When crested penguins in care, or carcasses, were available for measurement (sensu Warham, 1975), indicative sex was assigned cautiously on the basis of species-specific bill morphology (Woehler, 1995) obtained by the author. The extent of supercilia (prominent orange-yellow crests) enabled distinction between juvenile and adult birds. The colouration of flipper undersides was not used in species identification (*c.f.* Simpson, 2011) because of the high degree of variation among conspecifics (E. J. Woehler, unpublished data). Penguins reported as "Rockhopper" Penguins were deemed to be the eastern subspecies (*E. chrysocome filholi*) for this compilation, as there was no evidence to suggest any of these individuals were of the nominate species, and they are readily distinguished from Northern Rockhopper Penguin *E. moseleyi*. The scientific names for all species are presented in Table 1, and the species taxonomy herein follows BirdLife Australia (2023).

RESULTS

A total of 274 records of vagrant penguins were documented in Tasmania for the period 01 January 1991 to 31 August 2025. Dates were missing for four records; therefore, 270 records are included in this compilation (Table 2). The 270 records represented taxa from three genera: *Aptenodytes* (27 records), *Pygoscelis* (7), and *Eudyptes* (236). The most frequently reported species were Fiordland Penguin (121 records), Royal Penguin (33), and King Penguin (27). In total, 39 Rockhopper Penguins were reported, of which at least seven were identified as Northern Rockhopper Penguins. Records of vagrant penguins that could not be identified to species—due to carcass condition (e.g., missing heads) and/or insufficient detail in reports or photographs—accounted for 29 records.

When these records are combined with the earlier synthesis (Woehler, 1992), data are now available for 372 penguins from 10 taxa recorded from Tasmania (Table 3). The most frequently recorded species were Fiordland Penguin (166 records), Royal Penguin (66), Eastern Rockhopper Penguin and King Penguin (both 46), Snares Penguin *E. robustus* (22), and Gentoo Penguin *P. papua* (13). Four species have been recorded on fewer than 10 occasions from Tasmania: Northern Rockhopper Penguin (7), Erect-crested Penguin *E. sclateri* (3), Chinstrap Penguin *P. antarcticus* (2), and Adélie Penguin *P. adeliae* (1).

There are no documented records of Macaroni Penguins *E. chrysolophus* from Tasmania. Earlier published records attributed to this taxon reflect the fluidity of the taxonomic status of Royal Penguin relative to Macaroni Penguin; earlier taxonomic schema treated Royal Penguin as a subspecies to Macaroni Penguin (e.g., Christidis & Boles, 2008) despite disparate morphologies and allopatric breeding (Shaughnessy, 1975). More recent genetic studies support treating the two taxa as separate species (Cole et al., 2019; Frugone et al., 2018; Shepherd et al., 2021).

With the exception of the Adélie, Chinstrap and Northern Rockhopper Penguins, all vagrant penguins recorded from Tasmania to date are regional breeding species, originating from Macquarie Island (approximately 1,500 km to the southeast of Tasmania), the South Island of New Zealand (approximately 1,600 km east), or the New Zealand subantarctic islands (approximately 1,600–2,500 km east). The nearest breeding location for Chinstrap Penguins is the Balleny Islands, approximately 2,700 km south of Tasmania, while Adélie Penguins breed around the Antarctic continent, with the nearest colonies approximately 2,600 km to the south (Woehler, 1993). The closest breeding localities for the Northern Rockhopper Penguin are St Paul Island and Amsterdam Island in the Indian Ocean, approximately 5,900 km west of Tasmania.

For the period since 1991, there were typically fewer than 10 records per annum (Table 2, Fig. 1). Higher numbers of records (> 10) were reported from 10 years, with a peak in 1999 (27 records) and a second peak in 2023 (20); in both years, more

TABLE 1
Vagrant penguins recorded from Tasmania, from Woehler (1992a) and this study[a]

Common name	Scientific name	Macquarie Is.	New Zealand	IUCN status	Breeding season	Tasmanian peak(s)
King Penguin	*Aptenodytes patagonicus*	110,000	-	LC	Biennial	February–March
Gentoo Penguin	*Pygoscelis papua*	2500	-	LC	October–April	January–May
Adélie Penguin	*Pygoscelis adeliae*	-	-	LC	October–March	–
Chinstrap Penguin	*Pygoscelis antarcticus*	-	-	LC	November–March	–
Royal Penguin	*Eudyptes schlegeli*	750,000	-	LC	September–April	February–March
Northern Rockhopper Penguin	*Eudyptes moseleyi*	-	-	EN	August–March	–
Eastern Rockhopper Penguin	*Eudyptes chrysocome filholi*	37,500	39,000	VU	October–April	February, July–September
Erect-crested Penguin	*Eudyptes sclateri*	-	40,000	EN	September–April	–
Fiordland Penguin	*Eudyptes pachyrhynchus*	-	*c.* 19,000*	NT	June–February	July–September
Snares Penguin	*Eudyptes robustus*	-	29,000	VU	September–April	July–September

[a] The species taxonomy follows BirdLife Australia (2023). Estimated breeding populations (pairs) at Macquarie Island and the New Zealand peri-Antarctic islands (Mattern & Wilson, 2018; Salton et al., 2019; Pascoe et al., 2020, 2022; T. Mattern personal communication) are shown. Species' IUCN Red List Category are endangered (EN), vulnerable (VU), near-threatened (NT), and least concern (LC) (https://datazone.birdlife.org/). Indicative dates for species' breeding seasons are shown (i.e., from their return to nest or colony to end of moult). The months of peaks of reports from Tasmania are shown.

TABLE 2
Annual summary for penguin species' records 1991–2025 from Tasmania, with records to 1990 (Woehler 1992a) shown at left

Species	Records to 1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Species total
King Penguin	21			1		1		1	1		1	3	1	3		1				2		1	1				2		1		7						27
Gentoo Penguin	6						1			1			1	1		1	1							1													7
Adélie Penguin	1																																				0
Chinstrap Penguin	2																																				0
Royal Penguin	39	2	3	1								3				1	1	2										2		5	5		1	1	4	1	32
Northern Rockhopper Penguin	7							1		3	1														1										1		7
Eastern Rockhopper Penguin	18	1					1	2	1	2	2		1					2		1	3	1			1		1	1		1	5	1		1	1		29
Erect-crested Penguin	1							1				1																									2
Fiordland Penguin	50	3		7		1	2	8	2	14	2	5	1		1	1	1	1	2	2	1	3	1	2	6	4	6	2	6	6	2	2	4	13	3	7	121
Snares Penguin	6							2		1	3								2	1					1		6										16
Unidentified *Eudyptes spp.*								2	1	6	3																2		3	5				5	1		29
Annual total		6	3	9	0	2	4	17	5	27	12	12	4	4	1	4	3	6	4	6	4	5	2	3	9	4	17	5	10	17	19	3	5	20	10	8	270

than half of the records were of Fiordland Penguins. Elevated numbers were also reported in 2000 and 2001, and in four of the five years from 2016 to 2020, inclusive. The highest number of records in all years to 2025 occurred in February, accounting for 20% of all records (Table 3, Fig. 2). Records from January to March, inclusive, represented approximately 42% of all vagrant penguin records from Tasmania. This peak corresponds with the arrival of pre-moult birds of all ages, with earlier arrivals of pre-breeding and non-breeding birds followed by post-breeding individuals (Table 1).

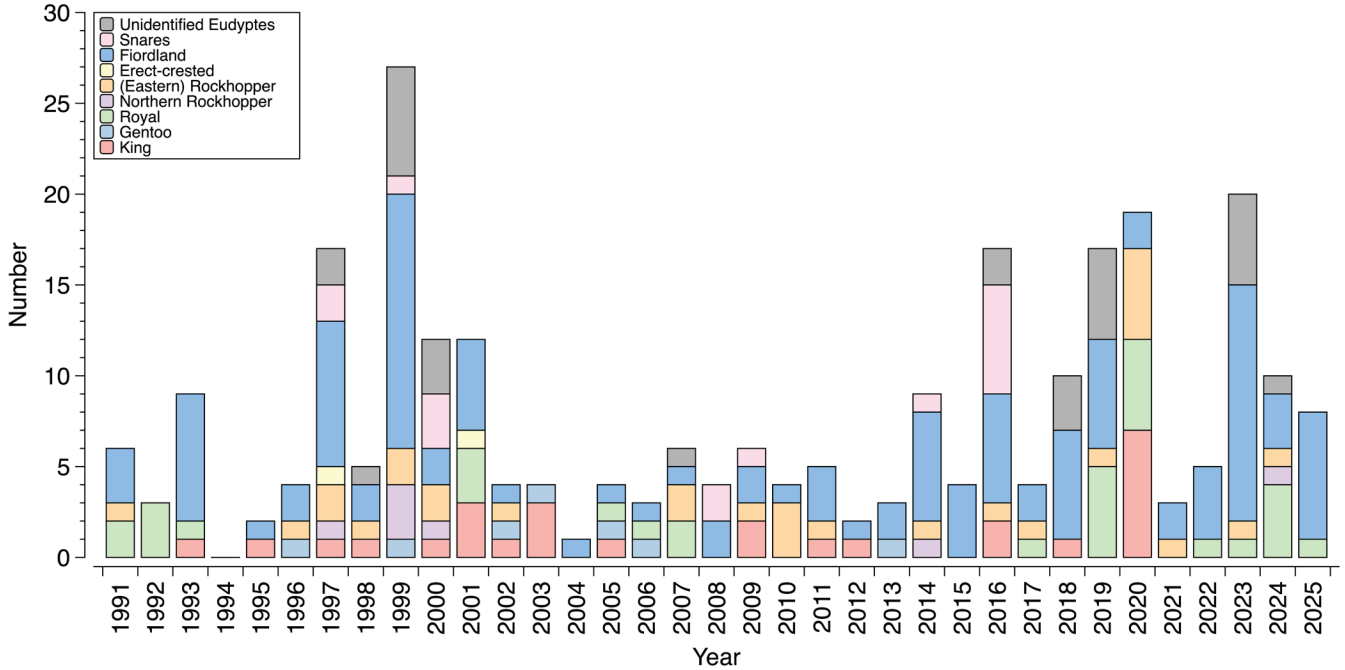

Fig. 1. Annual records of vagrant penguins to Tasmania, 1991–2025; *n* = 270 (see Table 2).

TABLE 3
Number of species' records per month, all records to 2025 (Woehler 1992a, this study)

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
King Penguin	7	18	12	3	1		2		2			1	46
Gentoo Penguin	2	2	1	1	4					1		2	13
Adélie Penguin												1	1
Chinstrap Penguin	1										1		2
Royal Penguin	4	28	23	4	3	1		1	1			1	66
Northern Rockhopper Penguin		2					2	2	1				7
Eastern Rockhopper Penguin	4	10		1		2	13	5	5	1	1	4	46
Erect-crested Penguin		1							1			1	3
Fiordland Penguin	18	13	7	2	3	10	38	27	25	14	6	3	166
Snares Penguin	1	2	1			1	5	4	4	1	1	2	22
Total	37	76	44	11	11	14	60	39	39	17	9	15	372

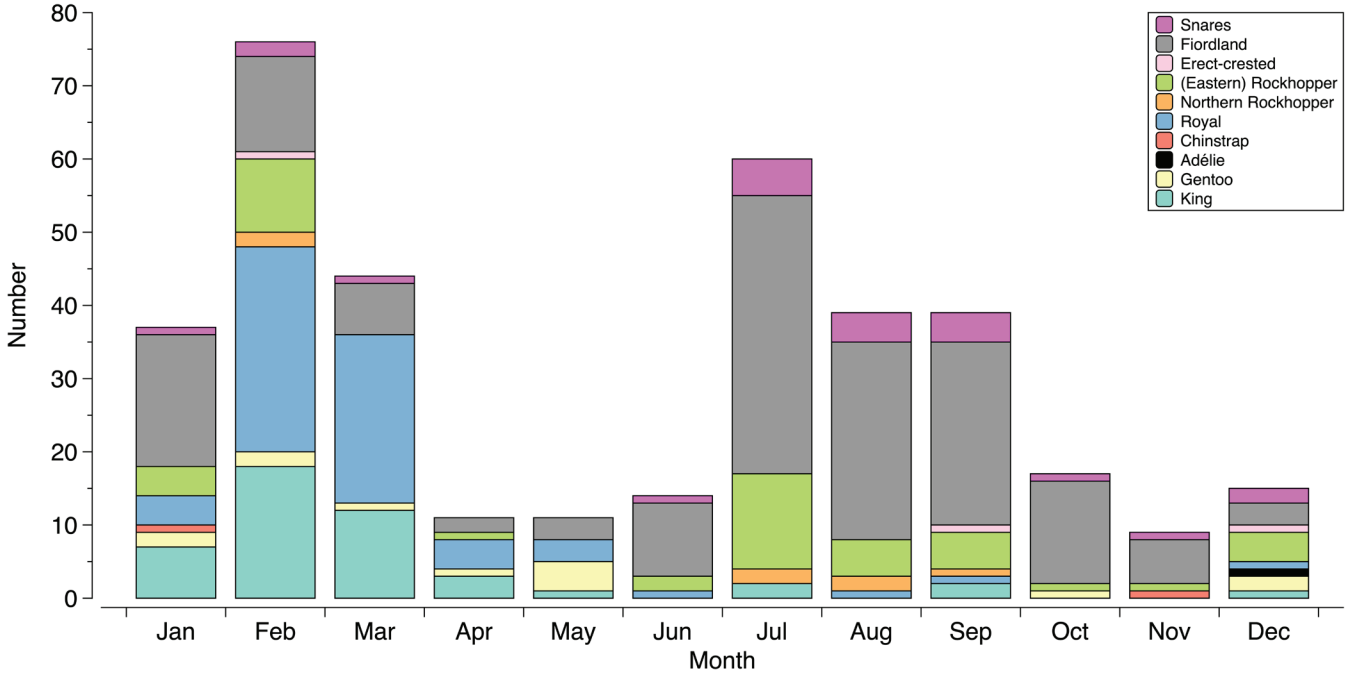

Fig. 2. Monthly records of vagrant penguins to Tasmania, all years to 2025; n = 372 (see Table 3).

A second peak in monthly records from all years was evident, with records from July to September, inclusive, comprising approximately 36% of all records. This late-winter peak has long been recognised by wildlife carers in Tasmania and is locally known as the "winter wreck" (L. Kurek, personal communication). The species predominantly reported during this period were Fiordland, Eastern Rockhopper and Snares Penguins. This peak overlaps with the onset of their breeding seasons (Table 1) and coincides with known at-sea distributions of individuals returning to breeding colonies (Green et al., 2022).

The ages of penguins were reported and assessed in over 70 reports, representing approximately 27% of the 1991–2025 records. Of these, 60% were identified as juvenile/fledglings or as immature/subadult birds. These estimates must be treated with caution, as inspection of photographs indicated that some individuals initially reported as immature or subadult had been misclassified based on bleached plumage in pre-moult birds. In several instances, worn and older feathers that appeared faded or bleached contributed to erroneous initial age assignments in King and crested penguins (i.e., as "juvenile" or "sub-adult"; E.J. Woehler, unpublished observations).

The moult status of penguins was recorded in 50 penguins, representing approximately 20% of the 1991–2025 records. The species most frequently reported to be in pre-moult or moult were Royal Penguin (42% of records), King Penguin (40%) and Rockhopper Penguin (30%). These estimates are likely conservative, as numerous images show penguins ashore that

appear to be pre-moult, with substantial body reserves. Moulting birds were typically identified by the presence of moulted feathers around them, as reported by observers or visible in photographs.

Indicative gender was determined for 35 crested penguins examined either in care or as carcasses. Although large-billed males and small-billed females can sometimes be identified due to species-specific sexual dimorphism in the genus *Eudyptes* (Warham, 1975), male and female bill measurements overlap in all crested penguins (Woehler, 1995; E.J. Woehler, unpublished observations), preventing an unambiguous determination in most cases. Measurements taken from museum skins introduce additional error, as bills shrink (Stonehouse, 1971), and there was no opportunity to dissect carcasses to confirm gender; consequently, no detailed analyses of the bill measurements were undertaken.

DISCUSSION

Limitations of the Compilation

In the absence of a formal, structured mechanism for reporting unusual records, a compilation such as this is dependent upon vagrant penguin records being submitted or made publicly available for collation. The overwhelming majority of reports compiled here were reported by members of the public and were typically posted to social media soon after observation, often on the same day. When contacted by the author for further details or additional photographs, most observers were willing to assist by providing additional material where available. Unsurprisingly, longer intervals between the original report and follow-up requests resulted in less additional material being obtained.

Reconciling disparate descriptions and dates for some reports proved challenging, particularly when multiple live birds or carcasses (as evidenced by museum acquisitions) were reported from the same general location. Different observers reported different aspects of live or dead penguins, at times further confusing the identity, location, and status of the bird(s) involved. In most cases, reconciliation of potentially overlapping or duplicate reports was achieved through discussions with observers and the inspection of photographs that documented the condition of the individuals (alive or dead); photographs also enabled confirmation of species identification where initial reports were inconclusive. Rapid scavenging by gulls *Larus* spp. and corvids *Corvus* spp. accelerated the decomposition of beach-washed carcasses, resulting in disparate reports on the condition of reported individuals within days.

In many cases, critical details such as age were unavailable, reducing the capacity to undertake more detailed analyses than those presented here—a limitation also acknowledged by Simpson (2008b). Despite these limitations, the compiled and tabulated records should be regarded as conservative: there can be no fewer records than the reports herein; however, given the extensive and convoluted Tasmanian coastline, it is likely that many additional instances of vagrant penguins were neither observed nor reported.

Vagrancy in the Australasian Region

Vagrant penguins have been previously documented from the Australian mainland (e.g., Brown & Corrick, 1979; Hosken et al., 1974; Simpson & McEvey, 1972). To date, however, no syntheses have been produced for any Australian mainland states. As in Tasmania, these occurrences are typically reported in the media and on social media, often with little scrutiny of species identification or of outcomes when the bird arrives alive. The absence of such syntheses limits broader analyses of spatial and temporal patterns and trends beyond Tasmania. Reports of vagrants to New Zealand (nine species of three genera; Checklist Committee, 2024) and from East Antarctica (e.g., Petersen et al., 2015; Shepherd et al., 2021; Woehler, 1992b) further emphasize the widespread occurrences of highly mobile penguins dispersing from peri-Antarctic breeding colonies, particularly given the high species diversity and abundance in the Australasian region (Table 1).

DNA-testing was used to identify Royal and Macaroni Penguins recovered from various locations (Shepherd et al., 2021), reflecting the challenges inherent in distinguishing these two closely related taxa. Although not investigating the genus *Eudyptes in toto*, these genetic analyses clearly identified Royal Penguin as a genetically distinct taxon and helped resolve a historically fluid taxonomy. Such testing is expensive and, unless specifically required, is not feasible for the majority of vagrant Eudyptid records. Moreover, the decomposition of many beach-washed individuals would likely further prevent such analyses. In the absence of more detailed investigations, the broad-scale spatial and temporal patterns identified in this compilation may provide sufficient information on regional dispersal patterns of focal species and, at the very least, offer a framework for future, more detailed studies.

Vagrancy in Tasmania

Clearly, many penguin species recorded in Tasmania should be considered regular, and in some cases, annual visitors (Tables 2, 3). Fiordland Penguin has been recorded in every month of the year, while Eastern Rockhopper and Snares Penguins have been reported from 10 months, and Royal Penguins from nine months. These high frequencies suggest that substantial numbers of these species are present in the waters surrounding Tasmania throughout the year. This pattern supports the earlier proposal that widely dispersing juvenile and subadult individuals constitute the majority of vagrants to Tasmania (and Australia), rather than adults (*sensu* Simpson, 2009). Approximately 66% of crested penguins were identified as juvenile (i.e., post-fledging) and sub-adult, lending further support to Simpson's interpretation that adult Eudyptid penguins are rarely recorded from Australia (Simpson, 2009).

Annual species diversity of vagrant penguins to Tasmania is typically two or three species (Fig. 1, Table 2), although up to seven species have occasionally been recorded within a calendar year. The highest penguin species diversity during the period 1991–2025 occurred in 1997 (seven species), with slightly lower diversity in 1999 and 2000 (six species in both years) and in 2024 (five species). These years of high diversity could be related to regional oceanographic conditions that may have concentrated foraging penguins at sea in the Tasman Sea. However, no consistent patterns in environmental and oceanographic parameters were identified across these high-diversity years, suggesting that different conditions may influence different species in different years.

The low frequency of Adélie and Chinstrap Penguin records from Tasmania may reflect the distances from Tasmania to their nearest breeding sites (East Antarctica: 2,600 km; Balleny Islands: 2,700 km, respectively; Woehler, 1993). However, the reports of Northern Rockhopper Penguins, whose nearest breeding locations

are St Paul Island and Amsterdam Island, nearly 6,000 km from Tasmania, reinforces the likelihood that species-specific factors are involved in the arrival of vagrant penguins to Tasmania. Major oceanographic boundaries (e.g., Antarctic Polar Front), but not smaller-scale fronts, are likely to present barriers to swimming penguins (Ainley & Wilson, 2023). High numbers of a single species (e.g., Fiordland Penguin: 14 and 13 records in 1999 and 2023, respectively; Table 2) lend further support to this interpretation.

Spatial and Temporal Patterns

This compilation of vagrant penguin records around Tasmania is strongly influenced by the distribution and abundance of people along Tasmania's coastline. The highest human population density is in the southeast of the state, which coincides with the closest landfall for penguins from Macquarie Island and New Zealand. Reports of vagrant penguins from the Australian mainland (e.g., Brown & Corrick, 1979; Simpson, 1972, 2011) support an approach in which the Tasmanian records are not examined at local (i.e., finer spatial) scales. This approach overcomes potential biases associated with increasing human presence and activity in coastal areas across the state, for which quantitative data is available.

Rising ocean temperatures around Campbell Island have contributed to population decreases exceeding 90% in its breeding population of Rockhopper Penguins (Cunningham & Moors, 1994; Morrison et al., 2015). Hence, fewer vagrants to Tasmania would be expected. Recently, Green et al. (2022) modelled potential responses of five taxa of crested penguins to rising ocean temperatures under two climate change scenarios, with the models based on contemporary at-sea habitat preferences. Their study predicted a general poleward (southward) shift in post-moult at-sea distributions by these taxa in response to the projected poleward changes in oceanic temperatures; however, no timeframe for this redistribution was provided.

Based on the predictions in Green et al. (2022), vagrant penguins could be expected to become less frequent in Tasmania as ocean temperatures increase. The projected southward shift in at-sea distributions, as penguins follow their preferred oceanic habitats, would likely result in a corresponding decrease in vagrant penguins reaching Tasmania as distributions move farther south. The data compiled in this study suggest that there may have been an increase in the number of records for three species—Fiordland, Snares, and Eastern Rockhopper—since 1991 relative to the period up to 1990 (Woehler, 1992; Table 2). Disentangling the influences of increased human presence on coasts, increasing interest in vagrant penguins, and the expanding use of social media with observed trends in vagrancy is likely to be impossible. However, the episodic nature of reports since 1991 indicate that these patterns are not artefacts of increased human recreational activities in coastal areas or the growing use of smart phones and social media.

Based on analyses of earlier vagrant penguin data, Woehler (1992) concluded that there was evidence of an increase in both the number and diversity of penguins reported from Tasmania to 1990. The data compiled here for the period 1991–2025 reinforce this earlier assessment, indicating that there has been a long-term increase in the arrivals of vagrant penguins to Tasmania, at least for some species, potentially since the 1970s. These results suggest that the responses by penguin species to rising ocean temperatures may be more nuanced than predicted by current modelling (Green et al., 2022).

Vagrancy, Dispersal, and Satellite Tracking

Satellite tracking of Fiordland, Snares, and Eastern Rockhopper Penguins has been undertaken in New Zealand (see Mattern et al., 2018, 2025; Poupart et al., 2019; Thiebolt et al., 2020). At Macquarie Island, Hull (1999) tracked Eastern Rockhopper and Royal Penguins using geolocators, whereas Wienecke and Robertson (2002) tracked King Penguins using satellite telemetry. The results of these tracking studies are compared in Ainley & Wilson (2023).

During November and March, adult Fiordland Penguins forage in the Tasman Sea to the west and southwest of the South Island of New Zealand, reaching 55°S and 140°E (Mattern et al., 2018; Thiebot et al., 2020), and extending even farther west to 110°E, southwest of Tasmania, between March and August (Mattern et al., 2025). The closest approaches to Tasmania by adult Fiordland Penguins in these studies were between 500 and 1,000 km. Tracking of Snares Penguins indicated a strong westward dispersion pattern (Green et al., 2022; New Zealand Geographic, 2016), with tracked birds reaching as far west as waters south of the Great Australian Bight, west of Tasmania. There are currently no tracking data for juveniles of either species; therefore, direct comparison to conspecific adults is not possible. However, the data reported here suggest similar dispersion patterns.

Eastern Rockhopper Penguins tracked from Macquarie Island and New Zealand dispersed predominantly southwest into the South Pacific Ocean, east of Macquarie Island and south of New Zealand, with some individuals reaching as far south as the Ross Sea in East Antarctica (New Zealand Geographic, 2016; Wienecke & Robertson, 2002). Some tracking data for King Penguins from Macquarie Island also indicate an eastward and southward dispersal (Wienecke & Robertson, 2002), as does tracking of Royal Penguins (Cresswell et al., 2023). The spatial overlap in at-sea distributions by breeding adults suggests that these species were foraging in areas with spatially consistent and predictable prey resources, although likely at different depths according to body size.

There is a marked disparity between the satellite-tracking data for penguins breeding in New Zealand and the frequency with which the species are reported from Tasmania. This likely reflects the fact that satellite packages are typically deployed on breeding adults to maximise the likelihood of device recovery. In contrast, many vagrant penguins recorded in Tasmania have been identified as juveniles or subadults based on plumage, and the dispersal behaviour of these age classes have not been investigated. A further limitation is the relatively small sample size in satellite-tracking studies, owing to the high costs of the devices and ongoing satellite tracking, which contributes to an incomplete understanding of species' at-sea distributions.

Animal Welfare Considerations–Management Implications

During the period 1991–2025, three records of vagrant penguins in Tasmania involved attacks by dogs while birds were ashore, two of which were fatal. These incidents comprised one King Penguin (February 2001, Marrawah: mauled and killed by a dog) and two Snares Penguins (July 2014, Cockle Creek: injured in dog attack; September 2016 at Eaglehawk Neck: killed in dog attack). Recently, a King Penguin was reported killed "either by a fox or dog" in South Australia in January 2024 (Australian Broadcasting Corporation,

2024b), just days after South Australia wildlife officials expressed "no concern" for the welfare of the penguin while ashore.

In recent years, wildlife carers and members of the public have been advised not to take vagrant penguins into care, despite images clearly showing evidence of injuries and clear animal welfare concerns. Phrases, such as "let nature take its course," have been used by government staff to justify the non-intervention approach for injured and/or emaciated penguins. A broad agency policy of non-intervention for vagrant penguins in Tasmania was inferred by veterinarians and wildlife carer communities across the state.

In January 2025, a subadult Fiordland Penguin was observed ashore with obvious injuries to the left shoulder/flipper and an apparent injury to the left foot. In addition, the sternum and clavicles were clearly visible in the photograph, indicating that the bird was substantially underweight and likely emaciated. The person who reported the penguin to the Tasmanian Department of Natural Resources and Environment (NRE) alerted the agency staff to the injuries, but the agency staff responded that the penguin "looked healthy." Despite the penguin's obvious injuries and emaciated state, a prohibition on intervention was established, and on inspection, the bird was absent the following day. In response to community concerns regarding the (in-)appropriateness of the response, agency staff subsequently advised that no formal non-intervention policy existed. This apparent inconsistency reinforced perceptions among the veterinary and wildlife communities of mixed messaging from the agency regarding appropriate responses to vagrant penguins.

Dogs are well-documented killers of Little Penguins in Tasmania (Blamey et al., 2024; Marker et al., 2024), and the data tabulated here show that dogs are capable of killing birds as large as King Penguins. Vagrant penguins observed in Tasmania are typically underweight or emaciated and often exhibit a broad range of injuries from punctures to propellor cuts (L. Kurek, personal communication; E.J. Woehler, unpublished observations). Approximately 20% of the records from 1991–2025 involved moulting birds, which are unable to return to the sea for safety. Underweight, injured, or moulting penguins are therefore highly vulnerable to dog attacks (there are no foxes in Tasmania). In contrast, the King Penguin in South Australia was observed to be active, injury-free, and potentially in pre-moult (Australian Broadcasting Corporation, 2024a). Despite likely having a body mass in excess of 10 kg, this large penguin did not survive its time ashore.

The deaths of vagrant penguins, including individuals as large as King Penguins, following dog attacks provide strong support for the development of a holistic, best-practice policy that prioritises animal welfare issues in responses to, and management of, vagrant penguins in Tasmania. Domestic dog attacks on vagrant penguins cannot be considered as "letting nature take its course." The capture and care of penguins for clinical treatment, rehabilitation, and release are consistent with community expectations. Best-practice guidelines for the rehabilitation and release of penguins are available elsewhere in Australia (e.g., DEECA, 2023), where intervention and rehabilitation of vagrant penguins are required, and similar guidelines could be adopted and implemented in Tasmania.

Other than a potential role in the capture of vagrant penguins in the wild, implementation of rehabilitation and release guidelines for vagrant penguins would impose minimal demand on government agency staff or resources, as the accredited wildlife carer network in Tasmania comprises volunteers with access to wildlife veterinarians and a demonstrated capacity to rehabilitate such individuals. Taking vagrant penguins into care would reduce their exposure to dog attacks and human disturbance. Species perceived as rare typically attract high numbers of curious onlookers ("nearly 300" people visited the King Penguin in South Australia in a single day; ABC, 2024b). The rehabilitation and release of threatened species would further reinforce community concerns on the response to vagrant penguins given the numbers of vagrant penguins reported from Tasmania.

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