Latham's Snipe in the Hunter Region: an overview

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The Hunter Region supports a large population of Latham's Snipe *Gallinago hardwickii*, a species which has been subject to varying levels of monitoring in the region since the 1990s. The largest known population of snipe in the region occurred at Pambalong Nature Reserve, which had a maximum count of 475 in 1999. Numbers declined at the site during the 2000s to the point where it is no longer monitored as the habitat has become largely unsuitable for snipe due to changes in hydrology. Contemporary surveys at over 40 sites, conducted as part of the Latham's Snipe Project, have identified seven sites that support nationally significant numbers of snipe (18 or more birds). Newcastle Wetlands Reserve (maximum count 205 in 2021) and Bulbul Crescent on the edge of Hexham Swamp (maximum count 126 in 2023) have hosted the largest of these populations.

INTRODUCTION

Latham's Snipe *Gallinago hardwickii* is a medium-sized shorebird with cryptic plumage. It is a trans-equatorial migrant which breeds in northern Japan and also Sakhalin Island and the Kuril Islands in far eastern Russia (Garnett & Baker 2021). Most, but not all, breeding birds spend the austral summer in south-eastern Australia (Higgins & Davies 1996; Garnett & Baker 2021). They arrive in August and leave by the end of February (Higgins & Davies 1996). They are crepuscular, and feed by probing soft ground with their long, flexible bill (Higgins & Davies 1996).

Latham's Snipe is unlike other shorebird species in that it does not generally gather in large flocks or use the same habitat as them (Department of Climate Change, Energy, the Environment and Water 2024). Counts in Australia tend to be of small numbers from scattered locations, with most individuals going undetected (Department of Climate Change, Energy, the Environment and Water 2024). However, Latham's Snipe may also congregate in larger numbers where suitable marshy habitat exists; some of the larger populations may occur within township boundaries (Naarding 1983). In Australia, it occurs in a wide variety of permanent and ephemeral wetlands but prefers open freshwater wetlands with nearby cover. During migration it may be found in saline or brackish habitats (Higgins & Davies 1996).

In August 2024, Latham's Snipe was listed as Vulnerable under the NSW *Biodiversity Conservation Act 2016* because it has likely undergone a decline of over 30 percent over the last three generations (NSW Threatened Species Scientific Committee 2024). Sites supporting 18 or more Latham's Snipe potentially qualify as nationally important habitat under the Commonwealth *Environment Protection and Biodiversity Conservation Act (EPBC Act) 1999*, and therefore, any planned changes to land use (no matter how minor) may require referral to the Federal Government (Hansen *et al*. 2024).

The Hunter Region is important for Latham's Snipe both on migration and as a terminus non-breeding area (Frith *et al*. 1977; Higgins & Davies 1996). There have been intermittent periods of systematic monitoring of Latham's Snipe in the Hunter Region since 1984 when surveys were first undertaken at Lorna Street Wetlands at Sandgate/Shortland. These wetlands are now referred to as Newcastle Wetlands Reserve and Market Swamp, the latter having had a peak count of 104 birds in 1985/1986 (Maddock 2008; Maddock & Newman 2018). More recently, participation by members of Hunter Bird Observers Club in the Latham's Snipe Project (LSP) has reinvigorated monitoring and given additional insights into Latham's Snipe in the region. The purpose of this paper is to present a contemporary overview of the distribution and abundance of Latham's Snipe in the Hunter Region.

METHOD

Study area

The Hunter Region is one of the most important for shorebirds in New South Wales due to the availability of extensive wetland habitats. The two largest of these are the Kooragang component of the Hunter Estuary (a Ramsar site) and Hexham Swamp. The Ramsar site is characterised by estuarine waters, intertidal mud, sand or salt flats, intertidal marshes and intertidal forested wetlands which include mangrove swamps and tidal and freshwater swamp forests (Brereton *et al*. 2010). Hexham Swamp is the largest wetland on the floodplain of the lower Hunter River, almost 2500 ha in size. Construction of floodgates in 1971 caused a loss of estuarine vegetation and brackish swamp and an expansion in reed swamp such as *Phragmites australis* (Winning & Saintilan 2009). Following the progressive opening of the floodgates as part of the Hexham Swamp Rehabilitation Project during 2008-2013, vegetation mapping indicated a continuing transition of habitat in a mosaic fashion including mangrove recruitment and expansion of saltmarsh, ponds, channels and mudflats (Hexham Swamp Rehabilitation Project Fact Sheet 2022).

Elsewhere in the region are a large variety of wetland habitats that include intermittent and permanent freshwater wetlands, wastewater treatment plants, paperbark woodlands, farm dams and intermittently wet pasture.

Sources of data

Latham's Snipe occurrence data were extracted from the Hunter Region Annual Bird Reports 1993 - 2017 (Stuart 1994 - 2018) and from the Birdata portal (https://birdata.birdlife.org.au/) into which monthly Hunter Estuary Waterbird survey results are entered.

Contemporary monitoring data were collected by members of Hunter Bird Observers Club since 2017, as part of the Latham's Snipe Project national monitoring. Surveys take place essentially simultaneously during single days in September, November and January. The survey sites were chosen based upon three factors: the likelihood of Latham's Snipe being present; the presence of snipe historically; and the availability of participants. LSP protocols involve walking though wetlands and flushing individuals present (Hansen *et al*. 2025); however, these were not always followed (mainly because of access issues) and many counts were done from a fixed point. Survey data from the program were collated and curated so that totals per survey day did not include double-counted birds. The raw (uncurated) data are available from the Birdata portal (https://birdata.birdlife.org.au/).

Opportunistic sightings from these sites or elsewhere were not analysed for this report. Instead, we have chosen to present information about three sites where regular surveys are ongoing, two former sites for regular surveys, and seven sites which are now surveyed as part of the LSP. These twelve sites represent locations that either currently, and/or previously supported significant populations of Latham's Snipe (**Table 1**).

Data from LSP site surveys were aggregated into reporting areas, which reflect the actual extent of habitat used by snipe for daytime roosting. That is, sites that are adjacent or contiguous (e.g. Morpeth Wastewater Treatment Works and Chisholm wetlands) effectively constitute a single ecological site for snipe. Aggregation is done based on maximum count at each site within a reporting area on any given survey day. This step ensures that the true population size within a reporting area is more accurately estimated by the survey results (i.e. by eliminating potential double counts caused by birds moving between sites within a reporting area).

RESULTS

Hunter Estuary waterbird surveys

During Hunter Estuary waterbird surveys, Latham's Snipe were reported from freshwater habitats on Ash Island once in 2020 and twice in 2023, and from the same wet grassland at Fullerton Cove twice in 2023 and once in 2024 (Birdata accessed 3/04/2025). Although Latham's Snipe may prefer freshwater habitat, 14 individuals were flushed from saltmarsh at Windeyers Reach on the Hunter River in February 2025 (L. Williams pers. comm).

Chisholm wetlands including Morpeth Wastewater Treatment Works

At Chisholm wetlands and the adjacent Morpeth WTW, one to two Latham's Snipe were present between August and February in most years from 2001 to 2025, the exceptions being 2010, 2015 and 2016. (Newman & Lindsey 2011; Birdata accessed 3/04/2025). In January 2022, a large count of 21 snipe was recorded at Chisholm wetlands off Billabong Parade during the LSP surveys.

East Seaham Property

One to five Latham's Snipe were recorded during nine out of 15 years on the semi-permanent wetland and one to 13 individuals were recorded on the permanent wetland during 8 years out of 15 years (Kendall 2023).

Irrawang Swamp (Wetland 803)

Over a 31-year period, the peak count was 73 individuals in 2004/05 (Maddock & Newman 2018).

Table 1. Key sites in the Hunter Region where past and/or contemporary monitoring for Latham's Snipe has occurred. Note some sites are referred to by different names and these have been included where known.

Site	Specific site survey details	Survey effort
Hunter Estuary	Ash Island, Stockton Sandspit, Fern Bay, Stockton Channel, Fullerton Cove, Kooragang Dykes on Kooragang Island. Note: most freshwater wetlands are not included. Small areas of Hexham Swamp and Tomago Wetland	Monthly since 1999 Monthly since 2013 and 2014 only
East Seaham Property	A cattle property at East Seaham containing one permanent freshwater wetland and one semi-permanent wetland	Bi-monthly since 2004
Irrawang Swamp (Coastal Wetland 803)	Previously surveyed by walking the circumference of the swamp and counting flushed birds	Most months between August and March spanning l985/86 to 2017/18 Then thrice-yearly (Sept, Nov, Jan) from 2017 to 2022
Pambalong Nature Reserve (Cedar Hill)	The surveys involved a team of eight to ten people some of whom walked through the wetland whilst others at strategically placed intervals counted birds as they flushed.	Every December between 1997 and 2013
Bulbul Crescent at Fletcher	LSP survey site. Freshwater wetland at the edge of Hexham Swamp. Latham's Snipe move freely between this waterbody and Kekul Street swamp and both wetlands constitute a single ecological site for snipe.	Thrice-yearly (Sept, Nov, Jan) since 2017
Newcastle Wetlands Reserve & Market Swamp	LSP survey site. This site is adjacent to and contiguous with other wetlands on Shortland Waters Golf Course. It is physically separated from Market Swamp, formerly an important site for snipe, by rail infrastructure	Thrice-yearly (Sept, Nov, Jan) since 2017
Cliftleigh Meadows Park wetlands	LSP survey site. Low-lying freshwater wetland prone to flooding after heavy rain and adjacent to urban development.	Thrice-yearly (Sept, Nov, Jan) since 2017
Wallsend wetlands	LSP survey site. Includes two wetlands ("Bunnings wetland" and Wallsend pool wetland) separated by Ironbark Creek and an elevated walking track. They constitute a single ecological site for snipe.	Thrice-yearly (Sept, Nov, Jan) since 2017
Stockton Borehole Colliery Dam, Teralba (Stockton Borehole)	LSP survey site. Shallow saline wetland with some mangroves adjacent to Cockle Creek. Sometimes has exposed mudflats. Bordered by forest to the west and a road on one side.	Thrice-yearly (Sept, Nov, Jan) since 2017
Chisholm wetlands Morpeth Wastewater Treatment Works	LSP survey site. Freshwater wetland with a complex of different surface water features including Morpeth WTW.	Thrice-yearly (Sept, Nov, Jan) since 2017 Monthly since 2001 including on LSP dates (thrice-yearly from 2017)

Pambalong Nature Reserve

Pambalong Nature Reserve (previously named Cedar Hill) historically hosted the biggest population in the region, with a peak count of 475 snipe in 1997. Because the surveys were conducted in a systematic fashion, the resultant counts are likely to accurately represent the actual numbers of Latham's Snipe present. Counts tailed off during the 2000s and have never returned to their historic numbers (**Figure 1**). As a consequence, this site is not included in the contemporary Latham's Snipe surveys.

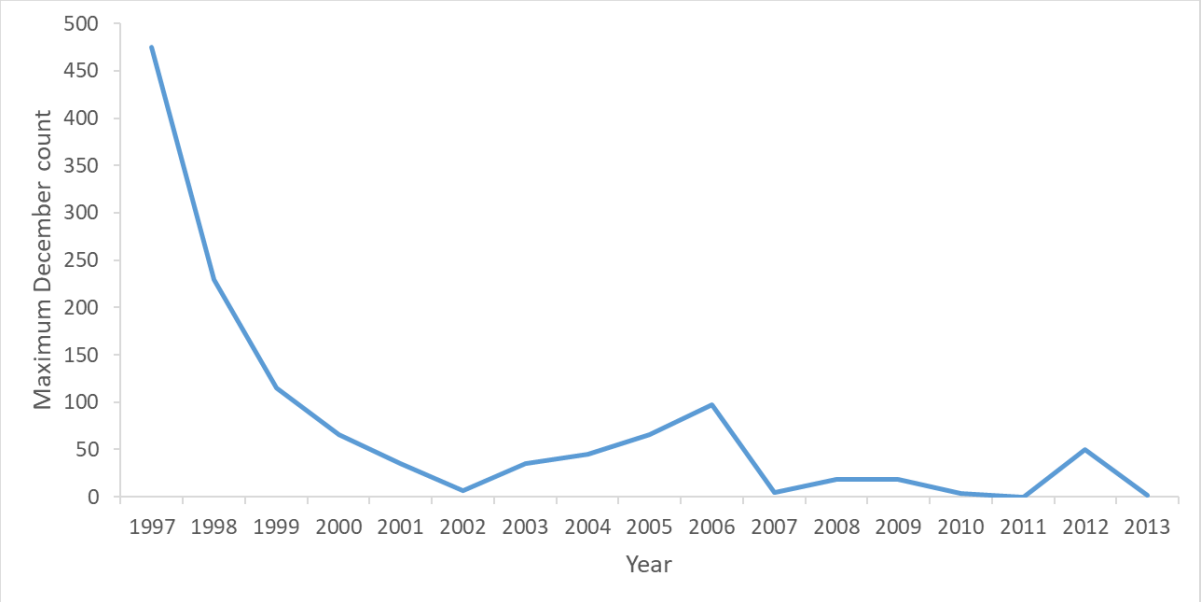

Figure 1. Latham's Snipe counts at Pambalong Nature Reserve 1997-2013. Source: Hunter Region Annual Bird Reports (1993 – 2017).

Latham's Snipe Project surveys

Latham's Snipe have been recorded at over forty sites in the Hunter Region (**Figure 2**). Survey effort has varied across these sites over the years (**Figure 3**), with the greatest survey effort and highest abundances occurring in 2021. Seven of the forty monitored sites have supported 18 or more birds (**Table 2**). Bulbul Crescent at Fletcher and Newcastle Wetlands Reserve at Shortland have hosted the largest contemporary Latham's Snipe populations in the Hunter Region. Both sites have supported significant congregations of Latham's Snipe on multiple occasions.

Table 2. Details of specific counts at seven key sites in the Latham's Snipe Project. No. counts = number of monthly counts since commencement of the LSP Hunter Region surveys in 2017. No. counts >18 = the number of site surveys that have met or exceeded the *EPBC Act* threshold. Freq. = proportion of times a count has exceeded the *EPBC Act* threshold.

Site	Max count	Year of max count	No. counts	No. counts >18	Freq.
Newcastle Wetlands Reserve	205	Nov 2021	13	5	0.4
Bulbul Cres / Kekul St, Fletcher wetlands	126	Jan 2023	16	7	0.4
Wallsend wetlands	53	Nov 2020	13	1	0.1
Stockton Borehole	25	Jan 2022	15	1	0.1
Cliftleigh Meadows Park	24	Jan 2022	4	1	0.3
Irrawang swamp	24	Nov 2018	12	2	0.2
Chisholm wetlands and Morpeth WTW	21	Jan 2022	9	1	0.1

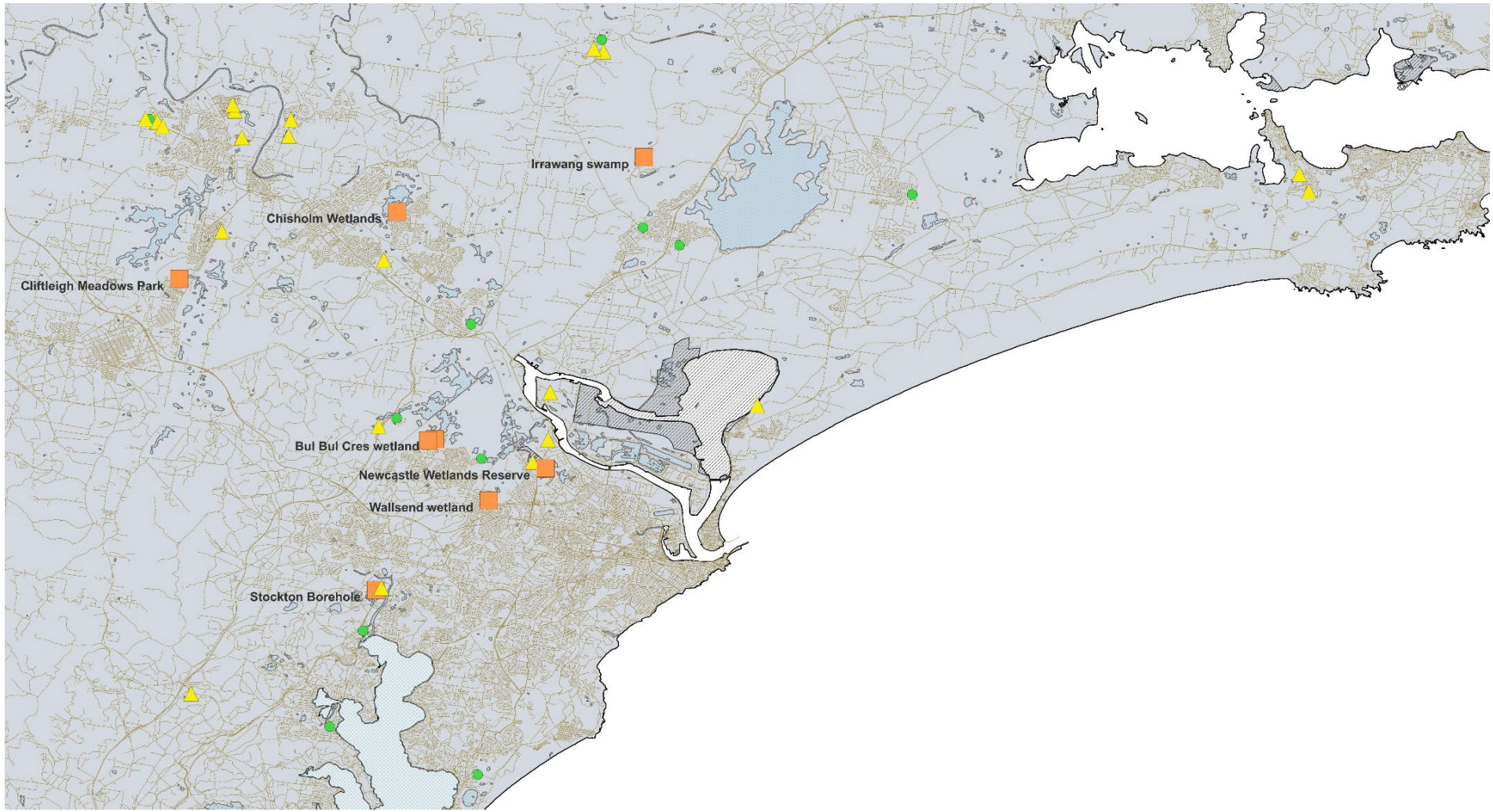

Figure 2. Map of the Newcastle and Hunter region showing the location of Latham's Snipe Project survey sites. Large orange (labelled) squares show sites that meet the *EPBC Act* threshold of 18 birds. Yellow triangles have had records between 1-18 birds and green dots mark wetlands where no snipe have been recorded. The Hunter Estuary Ramsar site is shown in dark grey stippling.

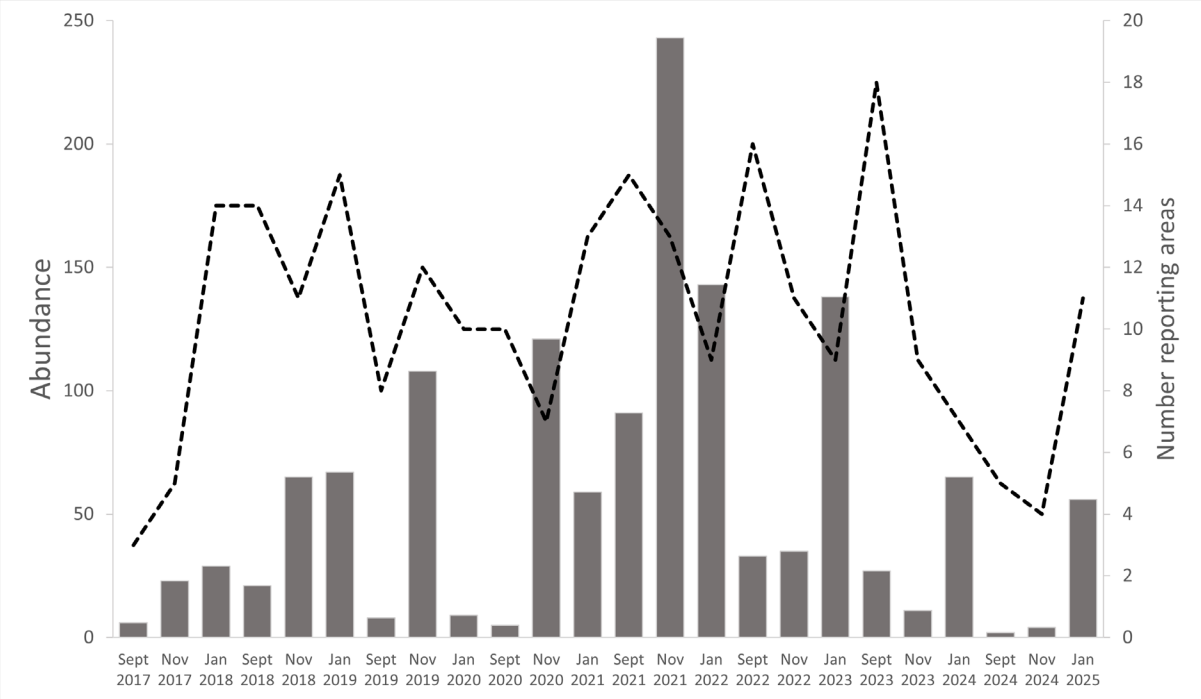

Figure 3. Results of Latham's Snipe Project surveys for all survey sites in the Hunter Region. Abundance (solid bars) represents the maximum count within reporting areas on any given survey. The dashed line represents the number of reporting areas counted on any given survey.

DISCUSSION

The Hunter Region is clearly important for Latham's Snipe and supports a range of wetlands that are used by the species throughout their non-breeding season. Latham's Snipe typically forage at night and roost during the day and will commute daily between their roost sites and nocturnal foraging sites (Todd 1998, 2000). These are usually between 0.5-5.0 km apart (Gould *et al*. 2025) and are likely to differ in terms of water regimes and vegetation structure (Hansen *et al.* 2024). All Hunter survey sites focus on daytime roosts and there is relatively little information about the location of night-time foraging sites. A single radio tracking study investigating snipe foraging behaviour focused on a handful of sites: Cedar Hill/Pambalong, Shortland Waters, Newcastle Wetlands and Birmingham Gardens (Todd 1998, 2000). Incidental observations of daytime foraging have been made on Ash Island in the Ramsar site, when climate conditions were suitable (October 2020: R. Murray, *in litt.*). Therefore, while the monitoring of Latham's Snipe is quite comprehensive in the Hunter Region, it provides information about population dynamics at daytime roost sites only and the majority of night-time sites are probably overlooked. This is a common feature of Latham's Snipe monitoring across Australia.

There are eight known sites in the Hunter Region which qualify (or previously qualified) as nationally important habitat as they support(ed) 18 or more individuals. They are Bulbul Crescent at Fletcher, Newcastle Wetlands Reserve at Shortland, Cliftleigh Meadows Park at Cliftleigh, Wallsend wetlands at Wallsend, Stockton Borehole at Teralba, Chisholm Wetlands at Chisholm, Irrawang Swamp at Raymond Terrace (Coastal Wetland 803 – not to be confused with a wetland with the same name: Irrawang Swamp - Coastal Wetland 804) and Pambalong Nature Reserve at Minmi. The latter two sites no longer qualify as nationally important habitat for quite different reasons which will be discussed below.

The Newcastle Wetlands Reserve and Market Swamp complex has been known to be a site of national importance since at least 1984 when over 100 individuals were recorded (Maddock & Newman 2018). The Market Swamp section has been severely degraded since the early 2000s and it is unlikely that Latham's Snipe still visit

the site. Despite extensive Water Hyacinth *Eichhornia crassipes* infestation the Newcastle Wetlands Reserve section remains a site of national importance for this species. During the summer months the infestation is so widespread that there is little open water visible and muddy edges are almost non-existent. It is not unusual to see snipe roosting or foraging on the matted vegetation.

Several factors affect the results of surveys of Latham's Snipe in the Hunter Region. Firstly, only a subset of suitable habitat in the Hunter Region is monitored and the total abundances recorded in surveys are unlikely to be indicative of the actual population of snipe visiting the Region. Additional sites can be found on eBird (around 50 sites) with maximum abundances of up to 51 snipe at any one site, but most of these sites occur in urban areas. Importantly, there has been no systematic monitoring in the Hunter Valley, and sites outside the urban boundary may support suitable habitat for the species. For instance, two Lathan's Snipe fitted with GPS satellite transmitters in Canberra in 2020 and 2021 were recorded on northward migration using farm dams and (presumably wet) paddocks about 15 km northeast of Singleton in February 2020 and in the Wallalong area in March 2022 (B. Hansen unpubl. data).

Another factor affecting presence or absence of Latham's Snipe is the dynamic nature of its preferred habitat - permanent and ephemeral wetlands (Garnett & Baker 2021) which can be subject to changes in wetting and drying regimes. For instance, changes in the water regime at Pambalong Nature Reserve near Minmi resulted in the site becoming too deep and also becoming overgrown with vegetation, such that it no longer provides suitable habitat for Latham's Snipe. Because of those habitat changes, monitoring of the site for snipe ceased in 2013. However, that situation could change in the future with variations in rainfall. Regular monitoring at Irrawang Swamp near Raymond Terrace ceased in 2020 for a different reason: a large housing development and its associated infrastructure resulted in permission to monitor the swamp being withdrawn. We are therefore no longer able to check if Irrawang Swamp (Coastal Wetland 803) is a site of national importance under the *EPBC Act*.

Survey effort was consistent in the case of the long-term regular surveys such as the Hunter Estuary, Morpeth Wastewater Treatment Works and the East Seaham property. Participation in the Latham's Snipe Project has revitalised targeted monitoring for Latham's Snipe in the Hunter Region but survey effort may be inconsistent as it depends on the number of volunteers available on the designated days.

CONCLUSIONS

The lack of information about important nocturnal foraging sites means that not all critical habitat is known, nor protected and such sites may be inadvertently destroyed. Most of the wetlands monitored lie within the urban boundary and there has been no systematic monitoring in the outlying areas of the Hunter Valley. The limited monitoring in the 1990s and 2000s showed that there was probably a large population of snipe in the Hunter Region which may still persist. However, it is not possible to investigate population dynamics in the broader region due to the lack of comparable monitoring to compare trends over the last 30 years. Nevertheless, the Hunter Region continues to provide important habitat for snipe, confirmed by the seven sites which currently qualify as nationally important. Changes to wetlands caused by invasive weed infestation or altered water regime reduce available habitat. Disturbance from human uses may force snipe to abandon sites. Ongoing participation in the Latham's Snipe Project will continue to provide a focus for locating and monitoring nationally important habitat for Latham's Snipe in the Hunter Region.

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