

## INTRODUCTION

During December 2015, a pair of Bush Stone-curlews took flight and abandoned, possibly forever, their long-standing foraging, roosting and nesting sites within Crown Reserve R64760 on the western tip of the Saratoga peninsula.

To comprehend the significance of such a seemingly trivial event requires an understanding of Bush Stone-curlew behaviour and, in particular, an appreciation of the attachment that Bush Stonecurlews have to the land which they inhabit.

Fairly large, nocturnal, ground-dwelling birds, Bush Stone-curlews were once found throughout most of Australia and have become very much part of the country's bush folklore. The birds' eerie night-time calls, often heard in the background of Australian movies such as *Crocodile Dundee*, are haunting and distinctive.

Today, mainly through loss of suitable habitat brought about by farming, urban development and other human activities, Bush Stone-curlews survive only in small groups here and there and throughout NSW are classified as endangered. The Brisbane Water Bush Stone-curlew population is the most southerly of the few remaining groups surviving east of the Great Dividing Range.

In the wild, Bush Stone-curlews can live for more than thirty years and pairs typically bond for life.

To subsist, each pair of Bush Stone-curlews requires its own home territory where the birds can safely roost on the ground by day, forage in the open by night, establish a nest site, also on the ground, and successfully raise its chicks.

Such is the connection that Bush Stone-curlews have to the land which they inhabit that, under normal circumstances, a pair of adult Bush Stone-curlews might rarely venture beyond its own territory. Resident birds will vigorously defend their home against other Bush Stone-curlews encroaching on that territory, even long after one of the resident pair has died.

Crown Reserve R64760, better known locally as Saratoga Wetland Reserve, is capable of supporting only one pair of Bush Stone-curlews and their juvenile offspring. Prior to December 2015, Bush Stone-curlews had permanently occupied the reserve throughout living memory.

Although Bush Stone-curlews may look like waders, they are not naturally birds of the wetland, as is the common perception locally, but need access to grassed and open woodland areas to survive

Within Saratoga Wetland Reserve is a small recreation area consisting of an oval, tennis courts and a sailing club. The presence of Bush Stone-curlews within the reserve has been loosely monitored since 1986 and records show that the birds consistently occupied the recreation area during that period. After dark the open grassed areas of the reserve became the Bush Stone-curlews' foraging habitat and the adjoining woodland provided cover for the birds to roost on the ground during the day. Nesting had been observed on the fringe of the recreation area and chicks had been raised to adulthood on at least three occasions.

The sudden abandonment during the nesting season of such a long-established home territory within Reserve R64760 by the resident pair of Bush Stone-curlews is a clear indication that our community's management and protection of those endangered birds at that location have been inadequate.

## **CROWN RESERVE R64760**

Similar to many of Brisbane Water's foreshore reserves, Reserve R64760 is Crown Land administered by the NSW government, but managed locally on a day to day basis by Gosford City Council.

Originally an estuarine wetland in its entirety, comprised mainly of open areas of saltmarsh bordered by mangroves and extensive tidal mudflats along its shoreline, Reserve R64760 was declared a Reserve for Public Recreation in 1934 by the NSW government.

However, apart from the construction of the existing sporting facilities in the north-eastern part of the reserve, all subsequent attempts by Council to develop the remainder of the wetland for sporting purposes have been thwarted by a local community concerned for the preservation of its natural environment.

In the mid-1980s, under newly introduced state environmental planning policies, most of the reserve and parts of the adjoining residential land were formally designated as estuarine wetland by the NSW government, effectively restricting future development.

A ban on the taking of shellfish from the Saratoga peninsula's extensive tidal mudflats adjoining the reserve was also imposed in response to the community's concerns regarding the environmental impact of an influx of visitors removing excessive quantities of shellfish for food.

The presence of the endangered Bush Stone-curlews within Reserve R64760 was not formally brought to the government's attention until as late as 2001 following an environmental assessment of the reserve for a redevelopment of the recreation area by Council and the construction of a boardwalk through the wetland.

Subsequently, in recognition of the permanent presence of the Bush Stone-curlews and several other ground-feeding bird species within the reserve and its immediate surrounds, the proposed redevelopment of the recreation area was significantly modified to minimise the impact on the environment.

At the insistence of the community, Council then developed a plan of management for the entire reserve which was approved by the NSW government in 2004. The plan of management included strategies for the enhancement of the Bush Stone-curlew habitat.

In 2005 more of the Bush Stone-curlew habitat was given formal protection. A small sand island to the north-west of Reserve R64760 was placed under the control of the National Parks and Wildlife Service to become Saratoga Island Nature Reserve, at the time a noted roosting and foraging site for wading birds, including several migratory species.

A year later, the NSW state government published a *Recovery Plan for the Bush Stone-Curlew* which, amongst other things, stipulated how areas of Bush Stone-curlew habitat throughout the state should be managed, whether in public or private ownership.

Today, after decades of being defended by the local community, the habitat of the Bush Stone-curlews on the western tip of the Saratoga peninsula is the most protected of any of the areas of land occupied by the local population of the species, on paper at least.

#### THE CENTRAL COAST

Identification, protection, enhancement and management of Bush Stone-curlew habitat, particularly the long-established territories of breeding pairs, are the key issues that need to be resolved if the iconic endangered species is to continue to exist within NSW.

In 2002, after being alerted to the presence of Bush Stonecurlews in the Saratoga Wetland Reserve, Gosford City Council commissioned a survey to determine the status of the entire population of Bush Stone-curlews within the Gosford local government area.

At the time, some residents were already aware of the presence of Bush Stone-curlews, particularly from the birds' calls at night, but no one knew precisely the extent of the local Bush Stonecurlew population, the number of surviving birds or their situation.

Anecdotal evidence suggested that, within the Brisbane Water district, the Bush Stone-curlews' range once extended from the lower reaches of the estuary to at least as far north as West Gosford and Erina.

The extensive survey conducted in 2002 unearthed a total Bush Stone-curlew population on the Central Coast of only twenty birds, including eight breeding pairs, restricted entirely to parts of the foreshores of Saratoga, Davistown, Kincumber, Kincumber South, Bensville, Empire Bay and St Huberts Island and to Rileys and Pelican Islands.

The majority of the Bush Stone-curlew habitat along the Brisbane Water foreshores was found to be on public reserves or land otherwise controlled by Council, with the remainder mostly located near the foreshores within areas of privately-owned land on the urban fringe.

To monitor the birds in the years ahead, a *Central Coast Friends* of the *Bush Stone-curlew* group was immediately established, formed around a core of experienced environmental consultants assisted by the National Parks and Wildlife Service, Council and local residents, some of whom lived near areas of Bush Stone-curlew habitat and were able to keep watch over individual birds.

Initially it was assumed that the Bush Stone-curlews on the Brisbane Water foreshores formed an isolated but stable population. Neither assumption proved to be the case.

Banding of newly-hatched Bush Stone-curlew chicks revealed that the birds are capable of flying outside of the region in search of a mate and a territory. Lone juvenile Bush Stone-curlews from the Central Coast have since been detected several times within the Sydney region and to the north, giving hope that a connection might eventually be made with a neighbouring Bush Stone-curlew population at Port Stephens.

Regular monitoring and subsequent surveys also revealed a sudden and unexpected decline in the Brisbane Water Bush Stone-curlew population. By 2007 the birds had reached their lowest ebb, there being as few as eight adult birds remaining, including just two breeding pairs, one of which had abandoned the local foreshores altogether to settle within the fenced grounds of Brisbane Water Secondary College at Umina, where the pair have remained.

The abandonment of Reserve R64760 in December 2015 by its resident pair of Bush Stone-curlews is a dire warning that the *status quo* cannot be tolerated if the Central Coast's population of Bush Stone-curlews is to survive.

## WHAT WENT WRONG?

Introduced predators, particularly foxes, feral and domestic cats, and dogs, are known to be major contributors to the decline of the Bush Stone-curlew species throughout NSW.

The mere presence of a predator within a habitat unsettles the native wildlife. A recurring presence ultimately leads to the abandonment of that habitat.

Fox control measures introduced by Gosford City Council seem to be effective in that fewer sightings of foxes are now being reported within the local Bush Stone-curlew habitat.

On the other hand, anecdotal evidence suggests that the number of domestic cats roaming the habitat at night is increasing. Domestic cats almost certainly contributed to the abandonment of the Saratoga Wetland Reserve by the resident nesting pair of Bush Stone-curlews in December 2015.

However, the sudden and unexpected decline in the number of Bush Stone-curlews on the Central Coast that occurred immediately after Council's initial survey in 2002 was undoubtedly related to Council's *Dog Exercise Areas Policy*.

In 2003, confronted by a vocal dog-owner lobby, Council approved several off-leash dog exercise areas on foreshore land within known Bush Stone-curlew country. In doing so, the councillors had taken it upon themselves to not only allow, but to encourage, known predators to be unleashed within the likely habitat of the endangered species.

Not until 2009, when confronted with the possibility of personal fines imposed by the NSW Land and Environment Court, did the councillors reverse their previous decision and suspend those same off-leash areas.

By then, though, the damage had been done. The number of Bush Stone-curlews had been reduced to less than half so that when faced with another outburst from dog-owners protesting the suspension of the off-leash areas, Council was able to produce environmental assessments that claimed the sites were no longer occupied by Bush Stone-curlews. Most of the previously suspended off-leash sites were reinstated.

Disregarding all regulations, many residents regularly exercise their pet dogs off-leash on foreshores outside of the prescribed exercise areas, seemingly without fear of prosecution. Saratoga Island Nature Reserve, a noted roosting and foraging site for wading birds just one decade ago is now comparatively devoid of bird life, largely due to the increasing presence of dogs, despite a complete and obvious ban on dogs within that reserve.

Overall, since 2002 Council's management of the Bush Stone-curlew habitat under its control has been inadequate. In Reserve R64760, for example, the enhancement of the Bush Stone-curlew habitat prescribed in the reserve's 2004 plan of management is yet to be addressed. On the contrary, as recently as 2014, then well aware of the precarious Bush Stone-curlew situation and choosing to ignore guidance from the *Friends of the Bush Stone-curlew*, Council installed floodlighting on the oval, further degrading the birds' foraging habitat.

Equally, since 2002 Council has failed to instigate any significant measures to encourage landowners to protect and enhance Bush Stone-curlew habitat on private property.

Put simply, the likely extinction of Bush Stone-curlews on the Central Coast is attributable to the ongoing deterioration of the birds' known habitat by human-related activities.

## A WILDLIFE PROTECTION AREA

The establishment of a *Wildlife Protection Area* over known Bush Stone-curlew country on the Brisbane Water foreshores is now crucial if the species is to survive on the Central Coast.

Wildlife Protection Areas are declared under the NSW Companion Animals Act for the protection of our unique native animals and their habitats.

In some *Wildlife Protection Areas* all domestic pets are restricted from entering while in others residents may walk their dogs on formal walking tracks only, provided the animals are leashed.

A proposal to establish a *Wildlife Protection Area* to protect Bush Stone-curlew habitat throughout parts of Saratoga, Davistown, Kincumber, Kincumber South, Bensville, Empire Bay and St Huberts Island might seem, at first, unnecessary because almost all of the restrictions governing the management of domestic animals on Council-controlled land in those areas, particularly for dogs, are already in place. But, to date, those restrictions alone have obviously not been effective in reducing the impact of domestic animals on the native wildlife.

Within *Wildlife Protection Areas* local authorities are given additional capacity to more effectively deal with the management of cats and dogs.

First and foremost, though, the establishment of a *Wildlife Protection Area* is an unambiguous 'in your face' declaration to residents and visitors alike that, seen or unseen, there is vulnerable native wildlife within the *Wildlife Protection Area* that is particularly worthy of protection.

There are precedents for the establishment of *Wildlife Protection Areas* in other NSW local government areas. Parramatta City Council, for example, has established several *Wildlife Protection* 

Areas for the general protection of the local wildlife while Manly Council, as another example, makes use of the different zonings within a *Wildlife Protection Area* to specifically protect a breeding colony of Little Penguins in a location of exceptionally high human activity.

A similar approach to that of Manly Council would seem appropriate for the local Bush Stone-curlew habitat, banning all domestic pets completely in some areas and requiring dogs to be on-leash and restricted to formal pathways in others.

Apart from signage, the most noticeable impact on residents and visitors of introducing a *Wildlife Protection Area* throughout the known Bush Stone-curlew habitat on parts of the Brisbane Water foreshore would be that dogs would generally be prohibited within the protected areas unless formal pathways were constructed.

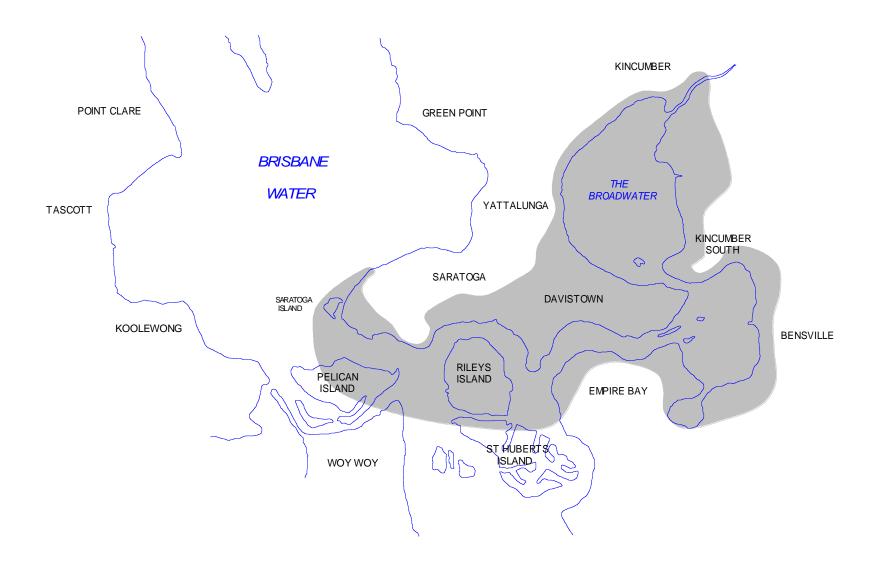
To be practical, in establishing a *Wildlife Protection Area*, the existing off-leash dog exercise areas could be tolerated, but ideally fenced and restricted to daylight hours.

For any law-abiding and environmentally-aware person, the changes brought about by the establishment of a *Wildlife Protection Area* would be insignificant and reasonable.

Landowners whose properties adjoin the proposed *Wildlife Protection Area* should be encouraged to enter into voluntary wildlife agreements if appropriate.

A Wildlife Protection Area on parts of the Brisbane Water foreshore to secure the Bush Stone-curlew habitat could effectively contribute to the preservation of the natural ecosystem and landscape of the waterway without necessarily diminishing the opportunities to use those foreshores for sport or recreation.

# **BUSH STONE-CURLEW COUNTRY**



#### **BRISBANE WATER**

The Brisbane Water estuary is regarded as an important waterway for both regional and national avifauna conservation.

In total, more than one hundred bird species inhabit the foreshores of Brisbane Water. Some of the commonly observed naturally occurring species that nest, forage or roost at or near ground level along the foreshores and are therefore particularly vulnerable to human activity in those areas, are listed below.

Most bird species are habitat faithful. Some birds of the migratory species listed, for example, fly 12-15,000 kilometres each way, year after year, from their breeding grounds in the high Arctic areas of Siberia and Alaska to forage along the Brisbane Water foreshores during the warmer months.

Within Brisbane Water, the relatively unscathed foreshores and inter-tidal zone in the vicinity of Saratoga Island, Pelican Island, Rileys Island, St Huberts Island, Cockle Creek and the Kincumber

Broadwater, all within Bush Stone-curlew country, continue to provide a richly productive natural environment for birdlife.

The creation of a *Wildlife Protection Area* to secure the Brisbane Water Bush Stone-curlew habitat would inevitably benefit the many other bird species whose local habitats are equally exposed to the impact of human activity.

The survival, or not, of the Brisbane Water Bush Stone-curlew population has become, in effect, a litmus test of how well the foreshore environment of Brisbane Water is being managed on the whole. Monitoring of the endangered Bush Stone-curlews in their natural habitat can reveal environmental impacts long before they otherwise become apparent.

Australian Pelican
Darter
Pied Cormorant
Little Pied Cormorant
Black Cormorant
Little Black Cormorant
White-faced Heron
Large Egret
Little Egret
Mangrove Heron
Nankeen Night-heron
White Ibis

Royal Spoonbill
Yellow-billed Spoonbill
Black Swan
Black Duck
Grey Teal
Chestnut Teal
Australian Wood Duck
Swamphen
Banded Rail
Pied Oystercatcher
Masked Plover
Pied Stilt

Eastern Curlew \*
Whimbrel \*
Bar-tailed Godwit \*

Brush-turkey
Brown Quail
Bush Stone-curlew
Satin Bowerbird

Caspian Tern

Crested Tern

<sup>\*</sup> Migratory (twenty-one species of regular migrant shorebirds are known to use Brisbane Water estuary as foraging habitat)

# SOMEONE DO SOMETHING!

Very few of the hundred or more bird species that currently inhabit the foreshores of Brisbane Water are likely to be encountered on Gosford's much-publicised waterfront.

Destruction of the former mangrove-lined shoreline, filling of the adjoining wetlands and mudflats for sporting, recreational and commercial developments, the construction of seawalls, the pollution of the waterway by urban runoff, and a high level of human activity have resulted in a near sterile landscape.

Throughout their own lifetime, today's long-time residents of Brisbane Water's foreshores have witnessed a gradual but perceptible decline of the marine life within Brisbane Water generally.

Most conspicuous has been the loss of the pods of dolphins that were such a familiar sight in the upper reaches of the estuary until the 1960s. Less noticeable, except to fishermen perhaps, were the schools of surface fish, splashing and feeding while seabirds circled overhead, and the runs of mullet that were occasionally so dense that it was practically impossible to look beyond them to the depths below. Each was an integral component of a once-thriving environment, lost forever in just one generation.

Without appropriate management, the demise of the struggling population of Bush Stone-curlews on Brisbane Water's foreshores is certain to feature in the next chapter of that shameful narrative.

The survival of the Bush Stone-curlews on the Central coast should be of concern to us all, even though the birds are naturally secretive and elusive and very few people are ever likely to encounter a Bush Stone-curlew in the wild.

To help, if you are not familiar with the birds of the Brisbane Water foreshore, on your next visit to the waterfront simply make a conscious effort to be more aware of your surroundings.

Maybe focus on a bird species that you do recognise and observe the birds closely, taking note of their every trait. On subsequent visits choose a different species, and so on, until eventually a field guide will be necessary to identify the lesser known bird types. At some point you may begin to wonder how you had been so unobservant in the past.

Encourage your friends and don't be reluctant to report any observations out of the ordinary to the *Community Environment Network* or *Birding NSW Central Coast.* Consider joining those groups to support their objectives.

Report to Council anything on the foreshores you consider unacceptable, if for no other reason than to establish a record of sorts.

If you are a foreshore resident, also consider carefully where your animals are able to roam and how you go about your daily business. Seemingly insignificant matters such as mowing, the use of fertilisers, the type and location of fencing, or lighting, can have a major impact on the habitat and behaviour of a Bush Stone-curlew.

In particular, contact your local politicians to express support for the establishment of a *Wildlife Protection Area* over Bush Stone-curlew country on the foreshores of Brisbane Water. Ultimately, politicians have the responsibility to determine that dubious balance between the 'needs' of humans and those of the environment, but a concerned and knowledgeable community has the responsibility to inform and influence the politicians in that decision-making process.

We each can and need to 'do something' to safeguard the future of the Bush Stone-curlews of the Central Coast.